

objected to on the probable contingency of the Government disposing of the land, in which case the requisition to make paths and public ways would not be proper, inasmuch as the Government would have no further connection with the island. With that view, he (Mr. Thompson) had prepared another Section; but as the learned Advocate-General proposed to make a further amendment upon the Section, he would leave him first to explain it to the Council.

THE ADVOCATE-GENERAL said, that the Section as proposed differed from the Section which stood in the Bill, in that the construction of roads, &c., was limited to the case that when an island became attached to the mainland, the same should be in the immediate or khas possession of the Government; and there was also a provision that the roads should be made at the expense and on the application of the proprietor of the adjoining tenure. As it was a delicate matter that a person should from accidental circumstances have the means of shutting out others from access to the river, he thought it desirable that the object of the Section should be considerably extended. The case might frequently occur, in the interval between the island being taken possession of and its becoming attached to the mainland, of a person acquiring a temporary interest under the Government; and it would not be fair to the person in whom that interest had been created, that the Collector on behalf of Government should, against his will, take up such portion of the land as had been granted to him temporarily, but that in such case the proper course would be that the Collector should proceed as in Act VI of 1857, and take the land as for a public purpose. He (the Advocate-General) presumed it might be said that any path or road leading to the river or sea might fairly be described as land required for public purposes. He would therefore move the substitution of the following Sections for the one proposed:—

(a.) "Whenever an island, possession of which shall have been taken by Government under Section III of this Act, shall become attached to the mainland, any person having an estate or interest in any part of the riparian mainland to which such island may become attached, may apply to the Collector to take measures for the construction of paths and roads on the island.

(b.) "Thereupon the Collector may require the applicant to make such deposit of money as to the Collector shall seem sufficient; and on such deposit being made, the Collector shall proceed to lay out and construct such paths and roads in and through the island as he may deem necessary for securing access to the river or sea from the land to which the island may have become attached.

(c.) "If it shall be necessary for the purpose of constructing any such path or road to take up land in the island under the provisions of any Act for the time being

in force for the acquisition of land for public purposes, any compensation, damages, and costs which the Government may have to pay in respect of the taking up of such land shall be paid and made good to the Government by the applicant.

(d.) "In every case the applicant shall be liable to pay and make good to the Government the costs of laying out and constructing such paths and roads as aforesaid, and any moneys due from the applicant under the provisions of this and the preceding Section may be deducted and retained by the Collector out of the deposit so made by the applicant as aforesaid."

THE PRESIDENT declared, that as the amendment proposed a considerable alteration, it would be proper to postpone its consideration till the next meeting of the Council.

The further consideration of the Bill was then postponed.

#### LIMITATION OF REVENUE APPEALS.

MR. TREVOR moved that the Report of the Select Committee on the Bill "to amend the law respecting appeals in cases under Regulation VII. of 1822" be taken into consideration in order to the settlement of the Clauses of the Bill, and that the Clauses be considered for settlement in the form recommended by the Select Committee.

The motion was agreed to.

Section 1 was passed as it stood.

MR. TREVOR said, he wished to draw the attention of the Council to an omission in the Report of the Proceedings of the Council of the 9th May. He was there made to say that the proposed Bill would merely shorten the period for appealing from the Commissioner to the Board of Revenue, and from the Collector to the Commissioner, from three months to one month. It was a mistake of his in saying that the Bill would shorten the period for appealing from the Commissioner to the Board of Revenue. It merely shortened the period of appeal from the Collector to the Commissioner. The period of appeal from the Commissioner to the Board was one month already, and would not be interfered with.

He thought it would be as well, with reference to appeals from the Collector to the Commissioner, that a certain time should be fixed for the commencement of the Act. He should therefore move that the following Section should be added to the Bill:

"This Act shall commence and take effect from the 1st of September, 1868."

The motion was agreed to.

The preamble and title were passed as they stood.

The Council was adjourned to Saturday the 30th instant.

## State of the Salt market during the Third Quarter of 1867-68.

- From R. L. MANGLES, Esq., Officiating Junior Secretary to the Board of Revenue, Lower Provinces, to the Officiating Secretary to the Government of Bengal,—(No. 2283C., dated Fort William, the 8th May 1868.)

IN continuation of my letter No. 529C., dated 28th January last, I am directed to submit the following report on the state of the Salt market during the months of October, November and December last, or the third quarter of the year 1867-68.

2. The quantity of Government Salt sold at the Presidency under whole-sale Rowannahs amounted to maunds 3,73,956, as shewn in the margin, giving a monthly average of maunds 1,24,652, being maunds 2,585 less than that of the previous quarter. The sales of Government Salt at Pooree amounted to maunds 5,820 of Pungah and maunds 38,483 of Kurkutch, against maunds 9,855 and 47,487 of Pungah and Kurkutch respectively in the previous quarter, and maunds 9,917 of Pungah and maunds 35,130 of Kurkutch in the corresponding quarter of 1866-67.

3. The following are the details of the above mentioned Presidency sales, viz., from the Hidgelee Depôt maunds 1,09,795 against maunds 1,12,385 in the previous quarter, and from Sulkea, maunds 2,64,161 against maunds 2,69,285 in the quarter preceding.

4. The sales of Excise Salt from the Dhossa Golahs during the quarter amounted to maunds 150 against maunds 650 in the previous quarter. The sales in Cuttack and Balasore from the stock of Excise Salt manufactured during the past season (1866-67) were maunds 4,300 and maunds 6,407 respectively, leaving a balance of maunds 30,607 and maunds 18,299 in each district. No Salt was manufactured under Licenses granted for the season 1867-68, up to the close of the quarter, either in Cuttack or Balasore.

5. The total importations into the port of Calcutta, and clearances of Sea-imported Salt, during the quarter, are shewn comparatively in the following Statement:—

DESCRIPTION OF SALT.	October to December 1865.		October to December 1866.		October to December 1867.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Liverpool Pungah ...	5,75,487	11,51,187	7,28,104	8,13,680	14,82,389	10,82,602
Foreign Kurkutch ...	3,69,900	2,55,704	3,00,853	2,23,298	2,89,480	1,85,479
Indian Ditto ...	2,68,656	2,48,581	1,09,424	2,10,754	58,906	57,508
Ceylon Ditto ...	69,367	57,410	14,618	21,883	15,272	10,100
Total ...	12,83,360	17,12,862	11,48,059	12,69,615	18,45,947	12,35,689

There is a decline in both importations and clearances, as compared with the results of the previous quarter to the extent of maunds 1,57,881 and maunds 7,06,413 respectively, but compared with the figures for the corresponding quarter of the past year, there is an increase under both heads.

6. The following are the details of the importations and clearances of Indian Kurkutch Salt given above:—

Exporting Port.	1865.		1866.		1867.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay	1,28,287	1,86,026	87,646	1,28,152	55,962	44,758
Madras	87,287	71,670	8,167	81,700	....	9,800
Ennore	35,888	....	13,041	50,902	....	....
Coconada	....	8,570	....	....	2,944	2,950
Canova,	....	2,000	....	....	....	....
Covelong	....	15,050	....	....	....	....
Eskapally	17,694	14,230	....	....	....	....
Total	2,68,656	2,48,561	1,09,424	2,10,754	58,906	57,508

The decline in both importations and clearances, as compared with the results of both the previous quarters and the corresponding quarter of the two preceding years, may be attributed to the same cause which was stated in the last report, *viz.*, to the sales being confined almost entirely to the Government and Liverpool Salts.

7. The quantities of Salt which have been despatched into the interior of the country, both East and West of the river Hooghly, *viz.*, *via* the border Chowkeys of Ballikhal and Sankrail and the three Railways, are shewn in the following Comparative Statement:—

PERIOD.	Via Ballikhal.	Via Sankrail.	By the East Indian Railway.	By the Eastern Bengal Railway.	By the Calcutta and S. E. Railway.
	Mds.	Mds.	Mds.	Mds.	Mds.
Third Quarter of 1865-66	4,40,041	1,18,520	2,16,346	....	....
Ditto 1866-67	4,68,806	1,14,272	2,13,544	....	....
Ditto 1867-68	4,19,946	1,14,528	2,52,638	....	....

The Salt Preventive Establishment that was formerly stationed at Sealdah, and which was re-established in April last, having been abolished in 1865, no information is available regarding the transport of Salt by the Eastern Bengal and the Calcutta and South-Eastern Railways, during the two previous years. The following Statement shews the quantities of Salt despatched by the East Indian Railway to Stations beyond Buxar during the quarter under review:—

Date.	Station.	Quantity.
		Mds.
October 23rd 1867	Zumaneah	250
December 5th "	Guhmer	250
" 8th "	Zumaneah	250
" 10th "	Ditto	300
	Total Maunds	1,050

8. The shipments of Salt at Liverpool, per published market reports, were as follows:—

In October 1867	...	...	Tons.	17,809
" November "	...	...	"	17,738
" December "	...	...	"	5,895
			Total Tons.	41,442

being tons 22,229 less than the total quantity shipped during the previous quarter.



9. The prices of Liverpool and other Salts per 100 maunds at the end of each fortnight of the quarter under review, as compared with the prices that prevailed at the same period of the previous year, are given in the following Statement:—

	Prices on 15th Oct.		Prices on 31st Oct.		Prices on 15th Nov.		Prices on 30th Nov.		Prices on 15th Dec.		Prices on 31st Dec.	
	1867.	1866.	1867.	1866.	1867.	1866.	1867.	1866.	1867.	1866.	1867.	1866.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Liverpool Pungah ...	106	124	96	129	90	125	100	112	98	105	89	98
French Kurkuteh ...	35	95	60	95	60	95	60	90	60	85	60	85
Judda " ...	72	95	72	96	70	96	72	96	72	93	74	92
Ceylon " ...	60	66	52	66	48	66	50	81	50	71	50	71
Scinde " ...	35	35	35	35	35	35	35	35	35	35	35	35
Bombay " ...	55	38	55	39	56	36	55	38	55	36	60	36
Madras " ...	40	41	36	48	36	47	36	48	36	38	36	38

10. The total quantity of Salt that was available for export on private trade, at the several Madras Depôts, on the first day of each of the three months of the quarter under inquiry, and of the corresponding quarter of the two previous years, is exhibited below:—

Month.			1865.	1866.	1867.
			Maunds.	Maunds.	Maunds.
October ...	...	...	7,70,030	10,33,140	10,72,033
November ...	...	...	9,58,864	11,34,340	12,57,895
December ...	...	...	8,49,155	11,62,074	12,52,563

11. The importations into the ports of Chittagong and Balasore, during the third quarter of 1867-68, and in the preceding quarter, are shewn comparatively in the following Statement:—

		Chittagong.		Balasore.	
		2nd Quarter.	3rd Quarter.	2nd Quarter.	3rd Quarter.
		Maunds.	Maunds.	Maunds.	Maunds.
Pungah ...	...	16,738	16,087	.....	.....
Kurkuteh ...	...	30,459	27,115	15,013	11,247
Total ...	...	47,227	44,103	15,013	11,247

By a clerical error, the figures given in the last quarterly report as the importations into the above ports, were stated to have been for the second quarter of 1866-67, instead of 1867-68.

12. The Board have again to express their regret at the delay in the submission of this report. In future, however, they hope to send in these reports with more regularity.

Results of the Meteorological Observations taken at the Surveyor General's Office, Calcutta, from 22nd to 31st May 1868.

MONTH.	Date.	Reduced Reading of Barometer at 10 A. M.	THERMOMETER.		Daily Range of the Temperature.	Mean Temperature for the day.	Mean Wet Bulb.	Computed Mean Dew-point.	Mean Degree of humidity for the day.	Prevailing Direction of Wind during the day.	Rain.	Max. Pressure of Wind.	Daily Velocity of Wind.	GENERAL REMARKS.
			Highest Reading.	Lowest Reading.										
		Inches.	°	°	°	°	°	°			Inches.	D.	Miles.	
May	22nd	29.83	88.0	77.0	18.0	84.9	79.0	74.9	0.73	S by W & S S W	...	4.9	142.9	Clear and scattered cumuli, high wind between 8½ and 9 P. M. Lightning at 8 and 9 P. M., slight rain at 9½ P. M.
	23rd	29.61	88.8	76.7	15.9	84.6	78.4	74.1	.72	Variable	...	...	104.9	Clear and scattered cumuli, lightning to S W at midnight, calm.
	24th	29.84	84.2	79.0	15.2	84.2	78.3	75.9	.77	S S W	...	4.7	132.2	Clear and scattered cumuli, high wind 3 and 4½ P. M., thunder and slight rain at 3 P. M.
	25th	29.73	84.7	78.0	16.7	85.1	80.4	76.4	.74	S S W & S by W	...	...	150.4	Chiefly scattered cumuli, calm.
	26th	29.81	88.0	79.4	16.6	86.5	80.1	76.3	.73	S S W & S	...	5.8	187.6	Clear and scattered cumuli, high wind between 6½ and 6½ P. M., lightning at 7 and 8 P. M.
	27th	29.75	85.5	79.3	16.2	86.6	79.4	75.1	.69	S & S S W	...	...	155.0	Chiefly scattered cumuli, lightning to N at 8 P. M., calm.
	28th	29.81	85.5	81.5	14.0	87.9	81.0	76.9	.71	S by W & S	...	...	98.0	Clear and scattered cumuli, calm.
	29th	29.78	85.8	80.5	15.3	86.7	80.0	76.0	.71	S S W & S W	0.23	5.4	101.5	Clear and scattered cumuli; brisk wind from 6½ to 8½ P. M., thunder and rain at 6 P. M.
	30th	29.70	84.5	81.0	18.5	87.2	81.0	77.2	.73	S S W	...	0.7	137.3	Scattered cumuli and cirri.
	31st	29.36	84.5	77.7	16.6	84.7	78.2	75.8	.77	S by E & S S E	0.53	12.0	200.2	Scattered cumuli, and stratus. Strong wind from 2½ to 3½ P. M., thunder at 4 P. M., lightning to W at 8 P. M., rain at 4 and 5 P. M.

The mean Temperature and the mean Wet Bulb are derived from the twenty-four hourly observations made during the day.

The Dew-point is computed with the Greenwich constants. The figures in column ten represent the humidity of the air, the complete saturation of which being taken at unity. The receiver of the lower rain gauge is 1 foot 2 inches, and that of the Anemometer 70 feet 10 inches, above the level of the ground. The velocity of wind, as indicated by Robinson's Anemometer, is registered from noon to noon.

The extreme variation of Temperature during the past ten days	...	...	19.3
The Max. Temperature during the past ten days	...	...	96.0
The Max. Temperature during the corresponding period of the past year	...	...	108.0
The mean humidity during the past ten days	...	...	0.73
The mean humidity during the corresponding period of the past year	...	...	0.71
Inches.			
The total fall of rain from 22nd to 31st ... { by lower rain gauge	...	...	0.81
...	...	...	0.67
Ditto ditto from 22nd to 31st, average of fourteen previous years	...	...	2.54
Ditto ditto between the 1st January and the 31st ultimo,	...	...	11.66
Ditto ditto during the corresponding period of the past year	...	...	5.67

The 2nd June 1868.

GOPHERAULT SEN,  
In charge of the Observatory.

## Meteorological Report up to 21st May 1888.

STATION.	Day.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. = 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
			Inches.	☉	☉				Inches.	
CALCUTTA.	16th	10	29.680	87	81	78	SSE	...	...	Scattered cumuli.
		16	29.785	89	80	83	S	...	...	Cumuli.
	16th	10	29.688	88	81	72	S	...	...	Scattered cumuli.
		18	29.642	88	79	61	S	...	...	Nimbi to N and thunder.
	17th	10	29.660	85	78	71	ENE	...	0.08	Scattered cirri.
		18	29.812	88	79	65	S by E	...	0.01	Scattered cumuli & nimbi to S.
	18th	10	29.695	84	79	70	SSE	...	0.03	Cumuli.
		18	29.774	81	78	68	SW	...	...	Scattered cirri.
	19th	10	29.850	88	81	72	SSE	...	...	Nimbi to S E. rest cumuli.
		18	29.715	81	81	68	SSW	...	0.02	Scattered cumuli.
SARON HILLS.	20th	10	29.608	84	79	79	SE	...	1.03	Scattered cumuli, and cirro-cumuli and low clouds from S E.
		16	29.764	89	79	82	SSW	...	...	Scattered cumuli.
	21st	10	29.828	87	80	72	SSE	...	...	Scattered cumuli and cirro-cumuli.
		16	29.724	89	80	66	S by W	...	...	Nimbi & cumuli & thunder.
	16th	9-30	29.838	87	83	83	S	Light	...	Cloudy.
		18	29.714	87	83	68	S	Moderate	...	Scattered clouds.
	16th	9-30	29.875	87	82	79	S	Moderate	...	Ditto.
		16	29.762	88	82	76	S	Moderate	...	Ditto.
	17th	9-30	29.895	87	82	79	S	Moderate	...	Ditto.
		18	29.771	89	82	78	S	Moderate	...	Ditto. Slight fall of rain at 21 hours yesterday.
CHITABONG.	18th	9-30	29.788	87	80	72	S	Light	...	Scattered clouds.
		18	29.704	88	80	69	S	Moderate	...	Ditto.
	19th	9-30	29.766	87	82	79	S	Strong	...	Ditto.
		18	29.642	88	82	70	S	Strong	...	Ditto.
	20th	9-30	29.798	88	78	78	S	Light	...	Ditto.
		10	29.707	88	79	72	S	Light	...	Ditto.
	21st	9-30	29.742	85	79	75	S	Moderate	...	Cloudy.
		16	29.673	88	82	78	S	Light	...	Clouds in northern horizon.
	18th	9-30	29.709	89	78	82	SW	Light	...	Cirro-cumulus.
		16	29.734	85	79	75	SW	Light	...	Cloudy horizon towards E and N E.
AKYAS.	18th	9-30	29.850	88	80	87	SW	Light	...	Cumulus.
		16	29.734	88	80	75	W	Light	...	Ditto towards E; distant lightning toward E & N E at 22 hours.
	17th	9-30	29.895	84	81	87	SW	Light	...	Cumulus.
		16	29.707	89	81	79	SW	Light	...	Cumuli towards E & N E; distant lightning towards E & N E at 22 hours.
	18th	9-30	29.610	84	80	83	S	Light	...	Cirro-cumulus.
		10	29.716	85	81	83	S by W	Light	...	Ditto.
	19th	9-30	29.789	81	79	81	E	Light	...	Cumulus; a few drops of rain this morning not measurable.
		16	29.727	89	77	78	NNE	Light	...	Overcast all day, heavy rain falling.
	20th	9-30	29.799	79	77	80	N E	Light	1.35	Cloudy.
		16	29.701	82	77	78	W S W	Light	...	Cirro-cumulus.
CUTTACK.	21st	9-30	29.750	82	79	67	SW by W	Light	...	Cumulus.
		18	29.627	84	79	79	S	Light	...	Heavy towards E and N.
	16th	9-30	29.909	85	79	71	E	Light.	...	
		18	29.821	88	81	72	W	Light.	...	
	16th	9-30	29.671	89	79	65	W	Light.	...	
		10	29.830	89	80	66	W	Light.	...	
	17th	9-30	29.956	85	79	72	W N W	Light.	...	
		16	29.821	88	82	76	W N W	Moderate.	...	
	18th	9-30	29.841	84	80	83	E by S	Light.	...	
		16	29.831	88	83	76	SW	Light.	...	
CUTTACK.	10th	9-30	29.801	84	78	75	NE	Light.	...	
		16	29.811	88	80	89	SW	Light.	...	
	20th	9-30	29.874	87	81	70	S	Light.	...	
		16	29.794	87	81	76	W	Light.	...	
	21st	9-30	29.840	81	77	82	E	Light.	0.27	
		16	29.784	87	80	72	S	Light.	...	
	16th	9-30	29.900	89	82	73	S by E	Light	...	Cumulostrati, cirrostrati and overcast.
		16	29.794	80	82	69	S by E	Moderate	...	Cirrostrati & cumuli; slight rain accompanied with thunder & lightning at 10 hours.
	16th	9-30	29.978	90	82	69	SE	Moderate	...	Cirro-cumuli, cirrostrati and strati, unsteady wind.
		10	29.849	89	80	67	SE	Moderate	...	Cirri to S W & N N W horizon; distant thunder in S W at 17-30, lightning, thunder with drizzling rain from 19-30 to 21-10.
CUTTACK.	17th	9-30	29.993	90	80	83	S	Light	...	Scattered cirri and str.
		10	29.817	93	80	54	SE	Moderate	...	Cumulostrati, cirri & nimbi horizon, unsteady wind.
	18th	9-30	29.934	85	70	64	SW	Light	1.3	Cirri and haze; severe lightning at 20-25, slight rain at 21-10. Heavy rain very severe lightning and thunder from 21-30 to 22-10; thunder & lightning ceased at 0-30 yesterday.
		16	29.794	89	80	83	S by E	Light	...	Cirri to S E & fine evening slight rain & very severe lightning and thunder at 21 hours.



STATIONS.	May.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. = 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
			Inches.	°	°				Inches.	
COCHIN (Continued)	19th	9-30	29.975	85	78	71	E by N	Light	0.06	Cirri, calm and fine forenoon.
	16		29.784	89	78	59	E	Light	...	Cumulostrati, cirri, cirrostrati & fine, distant thunder in N W at 20 h.; a N W at 21-5 accompanied with very severe thunder, lightning & good of rain, thunder & lightning continues.
	20th	9-30	29.914	85	77	68	S E	Light	0.3	Cumulostrati, cirrocumuli, cirrostrati.
	16		29.902	86	79	72	S by E	Light	...	Distant thunder in W at 10 h. thunder in W occasionally from 10-45 to 14 hours; few drops of rain at 10-15 & 12 hours, cirrocumuli, cirri overcast and calm, slight shower of rain with very severe thunder and lightning at 22-50.
	21st	9-30	29.888	84	76	64	W by N	Light	0.2	Cirri, calm and fine.
	16		29.769	86	76	69	E E E	Light	...	Cirri to E and fine.
MADRAS.	15th	10	29.864	89	78	48	S S E	11*	...	Heavy.
	16		29.759	89	78	48	S E	15*	...	Light haze.
	16th	10	29.912	89	79	62	S E	11*	...	Fine.
	16		29.828	89	81	69	S E by E	15*	...	Fine with light haze.
	17th	10	29.959	89	78	59	S E	10*	...	Cloudy.
	16		29.855	88	79	65	S E	11*	...	
	16th	10	29.938	91	79	53	S	9*	...	Ditto.
	16		29.611	88	82	78	S E by E	16*	...	Fine with light clouds.
	16th	10	29.854	92	84	70	S by E	14*	...	Ditto ditto.
	16		29.739	86	83	80	S E	15*	...	Clear.
	20th	10	29.883	92	83	67	S S E	13*	...	Passing clouds.
	16		29.719	89	82	73	S E	17*	...	Fine.
PACOL.	21st	10	29.842	93	81	57	S E by E	7*	...	Light clouds.
	16		29.726	86	80	75	E S E	12*	...	Cloudy.
	15th	9-30	29.849	82	79	87	S S W	Light	...	Partially cloudy.
	16		29.750	85	79	75	S S E	Light	...	Ditto.
	16th	9-30	29.911	84	80	83	E	Light	...	Ditto.
	16		29.787	86	81	70	S S E	...	...	Close, sky overcast.
	17th	9-30	29.921	84	81	87	W	Light	...	Partially cloudy.
	16		29.745	83	78	78	N E	Light	...	Very cloudy, gale at 16 hours.
	16th	9-30	29.894	88	79	83	S E	Light	...	Partially cloudy.
	16		29.753	80	77	88	E	Moderate	...	Very cloudy, a few drops of rain at 16 hours.
	16th	9-30	29.900	81	79	91	S E	Moderate	...	Very cloudy.
	16		29.755	79	76	86	E S E	Light	0.0	Sky overcast.
DARSSING.	20th	9-30	29.805	79	76	89	N E	...	...	Very close.
	16		29.720	81	79	91	S E	...	...	Very cloudy, threatening.
	21st	9-30	29.780	91	79	91	S W	Calm	0.7	Sultry, very cloudy.
	16		29.663	80	78	91	N N E	Fresh	...	Cloudy.
	15th	9-30	29.341	59	57	87	S E	Light	...	Misty.
	16		29.306	63	59	77	N W	Light	...	Ditto.
	16th	9-30	29.424	63	61	89	E S E	Light	0.15	Rather misty.
	16		29.357	63	61	89	S S W	Light	0.05	Misty.
	17th	9-30	29.456	62	59	82	N E	Light	...	Cirrocumuli, agreeable morning.
	16		29.341	66	53	80	W	Light	0.08	Rather misty, slight thunder and lightning.
	16th	9-30	29.354	68	59	77	E	Light	0.05	Mist rising towards E, heavy cumuli round horizon to S W W and N W.
	16		29.293	64	49	93	E by S	Light	0.62	Dense mist.
BENGAL.	19th	9-30	29.317	58	57	87	S E	Light	...	Rather misty.
	16		29.266	57	56	89	W by N	Light	0.05	Misty.
	20th	9-30	29.339	55	55	100	E S E	Light	0.60	Dense mist, unpleasant morning.
	16		29.260	59	57	87	W N W	Light	0.1	Misty.
	21st	9-30	29.289	49	57	93	E by S	Light	0.6	Dense mist.
	16		29.220	58	57	87	E	Light	0.04	Misty.
	15th	10	29.583	99	78	36	N E	...	...	
	16		29.485	108	74	21	N E	...	...	
	16th	10	29.649	97	79	43	E	Moderate	...	Strati.
	16		29.539	169	70	26	E	Light	...	Ditto.
	17th	10	29.736	73	69	90	E	Strong	0.6	Cumuli, cumulostrati, dust & thunder storm at 8 hours.
	16th	16	29.556	91	68	88	E	...	...	Strati.
	10		29.621	89	80	66	E	Moderate	...	Ditto.
	16th	16	29.465	98	78	38	E	Light	...	Ditto.
	10		29.565	89	78	59	E	Moderate	...	Ditto.
	20th	16	29.449	97	78	35	E	...	...	Ditto.
	21st	10	29.678	88	75	67	E	Moderate	0.35	Dust storm with thunder from N at 1-30 yesterday.
	16		29.458	89	77	56	E	Moderate	...	Strati.
	10		29.580	90	76	50	E	Moderate	...	Ditto, cirrostrati, cumulostrati.
	16		29.461	91	79	56	Calm	...	...	Cirrostrati, cumulostrati.

\* Velocity in miles per hour.

STATION.	Day.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
MOOREN.	15th	9-30	28-820	85	70	24	SE	...	...	Sharp S E wind from 8 till 14-4.
	16	10	28-844	104	74	24	Calm	...	...	Sharp S E wind at 7, sky hazy at 15 h; clouds gathered, thunder and lightning at 18; strong wind from S E bringing great reduction of temperature, also rain.
	16th	9-30	28-003	94	75	28	SE	...	...	...
	16	16	28-886	102	79	26	SE	...	...	...
	17th	9-30	28-039	92	70	29	SE	...	0-11	Stiff S E breeze from early morning till 12.
	16	16	28-911	100	73	27	Calm	...	...	Few cirri in the horizon.
	18th	9-30	28-904	92	74	39	SE	...	...	Strong S E wind up till 13 hours.
	16	16	28-831	88	75	30	Calm	...	...	Hazy morning, sharp S E wind, clouds gathering, dust storm from S E at 17-30 another at 20-15 with rain, thunder and lightning.
	18th	9-30	28-890	91	75	44	SE	...	...	Sharp N E wind at 4 morning to S E at 7, continuing thus till 10 hours.
	16	16	28-759	93	75	30	NE	...	...	Cloudy morning S E wind, dust storm at 13, much heavy rain at 18-30, wind N E till 3 hours.
MOOREN.	20th	9-30	28-885	87	70	39	SE	...	0-15	Thunder and lightning in south after sunset.
	16	16	28-814	91	73	36	SE	...	...	Thunder storm from 6 to 8 A. M., strong wind slight rain.
	21st	9-30	28-809	88	72	43	SE	...	...	Cumulus, cumulostratus, drops of rain.
	16	16	28-771	97	75	32	SE	...	...	Cumulostratus.
	15th	10	28-702	82	75	42	...	...	...	...
	16	16	28-581	97	73	40	...	...	...	...
	16th	10	28-814	81	79	91	...	...	...	...
	16	16	28-852	91	77	50	...	...	...	...
	17th	10	28-789	91	78	53	...	...	...	...
	16	16	28-779	94	79	49	...	...	...	...
PATA.	18th	10	28-733	85	76	64	...	...	...	...
	16	16	28-679	90	76	50	...	...	...	...
	10th	10	28-714	80	74	74	...	...	0-36	Cumulus.
	18	18	28-555	88	70	61	...	...	...	...
	20th	10	28-821	89	67	69	...	...	0-60	Heavy thunder storm with rain from N W in morning.
	16	16	28-674	83	75	67	...	...	...	Cumulus.
	21st	10	28-521	87	76	68	...	...	...	...
	16th	9-30	28-049	92	77	48	E	...	...	...
	3-30	3-30	28-500	94	86	67	E	...	...	...
	16th	9-30	28-748	88	75	57	E	...	...	...
HAZARBAUGH.	17th	9-30	28-677	95	81	60	SE	...	...	...
	9-30	9-30	28-781	89	77	36	SE	...	...	...
	18th	9-30	28-617	80	75	57	SE	...	...	...
	3-30	3-30	28-513	95	77	41	E	...	...	...
	19th	9-30	28-702	92	77	49	SE	...	...	...
	8-30	8-30	28-686	95	84	61	E	...	...	...
	20th	9-30	28-672	74	71	85	NE	...	0-45	Heavy rain.
	3-30	3-30	28-597	77	73	77	E	...	...	...
	21st	9-30	28-680	76	72	81	SE	...	0-45	Fine day, heavy rain.
	3-30	3-30	28-526	85	74	67	NE	...	...	...
FALAK POINT.	16th	9-30	27-839	83	72	58	SE	...	...	...
	3-30	3-30	27-761	95	75	30	E	...	...	...
	18th	9-30	27-904	86	75	57	S	...	...	...
	3-30	3-30	27-706	95	77	41	S	...	...	...
	17th	9-30	27-936	84	77	71	S	...	...	...
	3-30	3-30	27-654	75	68	66	NE	...	...	...
	18th	9-30	27-886	85	73	50	SE	...	0-08	Ditto ditto from S E to N at 8 P. M., ditto.
	3-30	3-30	27-704	88	74	49	E	...	...	...
	19th	9-30	27-811	81	70	55	S	...	...	...
	3-30	3-30	27-751	73	67	71	S	...	...	...
HAZARBAUGH.	20th	9-30	27-854	67	67	100	E	...	0-67	Cold overcast ditto on 18 with slight rain.
	3-30	3-30	27-751	82	73	63	SE	...	...	...
	21st	9-30	27-826	79	66	54	NW	...	...	...
	3-30	3-30	27-754	89	75	40	SW	...	...	...
	10th	9-30	28-710	86	62	83	SW	...	...	...
	16	16	28-612	88	64	83	SW	...	...	...
	11th	9-30	28-714	87	63	83	SW	...	...	...
	16	16	28-682	88	64	83	SW	...	...	...
	12th	9-30	28-606	85	61	83	SE	...	...	...
	16	16	28-679	85	61	83	SW	...	...	...
FALAK POINT.	13th	9-30	28-774	87	63	83	S	...	0-8	Strong breezes.
	16	16	28-774	86	64	83	SW	...	...	...
	14th	9-30	28-763	88	63	80	SW	...	...	...
	16	16	28-672	84	60	83	S	...	...	...
	15th	9-30	28-796	86	62	83	SW	...	0-2	Moderate breezes, a heavy squall with thunder & lightning & rain at 12 hours.
	16	16	28-714	87	63	83	SW	...	...	...
	16th	9-30	28-871	88	64	83	S	...	...	...
	16	16	28-761	88	64	83	SW	...	...	...
	16th	9-30	28-871	88	64	83	S	...	...	...
	16	16	28-761	88	64	83	SW	...	...	...

BENGAL SECRETARIAT,  
The 30th May 1868.

HENRY F. BLANFORD,  
Meteorological Reporter to Govt. of Bengal.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JUNE 10, 1868.

## OFFICIAL PAPER

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.*

### Proceedings of the Council of the Lieutenant-Governor of Bengal for the purpose of making Laws and Regulations.

Saturday, 30th May 1868.

#### PRESENT:

HIS HONOR THE LIEUTENANT-GOVERNOR OF BENGAL, *Presiding*:

T. H. COWIE, Esq., *Advocate-General*,  
H. L. DAMPIER, Esq.,  
E. T. TREVOR, Esq.,  
A. R. THOMPSON, Esq.,  
KOOBAR HARENDRA KRISHNA, RAI BAHADOOR,  
BABOO RAMANATH TAGORE,

H. KNOWLES, Esq.,  
BABOO PEARY CHAND MITTRA,  
T. ALCOCK, Esq.,  
H. H. SUTHERI  
KOOBAR SATYAN GHOSAL.

#### LIMITATION OF REVENUE APPEALS.

MR. TREVOR moved that the Bill "to amend the law relating to appeals in cases under Regulation VII of 1822" be passed.

The motion was agreed to, and the Bill passed.

#### POLICE AND CONSERVANCY OF TOWNS.

MR. DAMPIER moved that the Report of the Select Committee on the Bill "to amend and consolidate the law for the regulation of Police in Towns under the control of the Lieutenant-Governor of Bengal, and for the Conservancy and Improvement thereof," be further considered, in order to the settlement of the Clauses of the Bill.

The motion was agreed to.

Section 59 provided that the assessment should stand good for one whole year.

After a verbal amendment—

KOOBAR HARENDRA KRISHNA moved the substitution of the words "three years" for "one whole year." His reason for doing so was that in the Mofussil the owner and occupier of a house was in general the same person. In Calcutta and in places under the District Municipal Improvement Act, the assessment was for three years, and he thought it would be advantageous to the people if the assessments under the present Bill were also to stand good for three years. He did

not think it would much benefit the finances of the Town Committee if there was an annual assessment, for generally, no doubt, the assessments would stand good for more than one year. But the amendment which he proposed would, he thought, remove a great deal of anxiety from the minds of the people, for they would then know that when an assessment was once made, it would hold good for three years.

BABOO PEARY CHAND MITTRA said, he would support the amendment. Those who had been in the Mofussil must have observed that there was hardly any change for years in property; the same dull, monotonous aspect was presented almost every where. One object gained by the amendment would be that the people would not be kept in *terror*; they would know that the assessment would stand good for three years. It was, moreover, desirable to accustom the people gradually to Municipal improvement; they should be allowed to get attached to the institution, and great care should be taken not to make them dissatisfied in any way.

THE ADVOCATE-GENERAL said, the honorable mover of the amendment had acquainted him with his intention to bring forward this amendment, and he, the Advocate-General, had at first sight expressed his approval of it; but on further

consideration that, as the Section now stood, the amendment was quite unnecessary. Practically, the same assessment might go on for an indefinite period of years. Under the 54th Section of the Bill, the Magistrate might require that, instead of a new assessment, there should merely be a revision or amendment; and again he might direct the simple adoption of the assessment for the time being in force, and by the provision in Section 59 that every assessment should be valid for one year, coupled with the proviso that no new assessment was to be made until made and published before the expiration of the first three months of the year, more was gained than would be gained by the proposed amendment.

MR. DAMPIER said, under the Bill as it stood, the assessment would be adopted from year to year; and, practically, unless there was some good reason for doing so, a new assessment would be made. But that, he believed, would fail to secure the object of the amendment. The hon'ble member wished it to be guaranteed that the assessment once made should not be interfered with for three years. The practical difficulty was this—that the Budget Estimate might be more or less for one year than for the last, and that would make it necessary to revise the assessment. He (Mr. Dampier) thought that with Section 55 as now printed, sufficient protection and security were given.

KOOMAR HARENDRA KRISHNA said, under the 55th Section the revision of the assessment was optional. If the Magistrates chose, they might direct it to be revised every year. In one case the present provision might be beneficial to the people; but if the assessment was to be revised and raised yearly, it could not but be harassing to the people.

The Council then divided:—

Ayes 8.

Noes 4.

Koomar Satyanand Ghosh.  
Mr. Sutherland.  
Mr. Alcock.  
Baboo Peary Chand Mitter.  
Mr. Knowles.  
Baboo Ramanath Tagore.  
Koomar Harendra Krishna.  
The President.

Mr. Thompson.  
Mr. Trevor.  
Mr. Dampier.  
The Advocate-General.

The motion was therefore carried, and the Section as amended agreed to.

On the motion of MR. DAMPIER, Section 55 was transposed so as to stand after Section 59.

The consideration of Sections 60 to 66 was postponed, as they were affected by the amendment made in Section 59.

Sections 67 to 69 were agreed to.

Section 70 was passed after a verbal amendment.

Sections 71 and 72 were agreed to.

Section 73 was passed after verbal amendments.

Section 74 was agreed to.

Section 75 was passed after verbal amendments.

Sections 76 to 82 were agreed to.

Section 83 was passed after a verbal amendment.

MR. DAMPIER said, under the Section just passed, Government was empowered to extend to any place any of the provisions of Schedule G, which contained rules for conservancy, with penalties attached. In the 15th Section of the Schedule there was a provision for the levy of all sums recoverable under any other provision of the Schedule; for instance where the Magistrate had any work which could be done at the expense of the owner, Section 15 provided that any sum so incurred might be recovered as a debt due to the Government. He proposed to transfer that Section, with modification, to the portion of the Bill which the Council was now considering, as it was a provision which ought to be in the body of the Bill, rather than in the Schedule. The Section which he proposed to insert here would stand as follows:—

"It shall be lawful for the Magistrate whenever any sum may be recoverable from any person under any of the provisions in the said Schedule G, contained, for the expenses of any work performed by such Magistrate, to make out a bill of the amount of such expenses, and to cause notice of the particulars of such bill to be served upon the person liable to pay the same. If such bill shall not be paid within five days after the service of such notice, the amount thereof may be recovered from the person upon whom the bill shall have been so served as if such amount were an arrear of assessment due under the provisions of this Act."

The motion was agreed to.

Sections 84 to 90 were agreed to.

Section 91 was passed with a verbal amendment.

The consideration of Section 92 was postponed.

Schedules A to F were agreed to.

Schedule G was passed with the omission of Section 15, which had already been transferred to the body of the Bill.

Schedule H was agreed to.

The further consideration of the Bill was postponed.

#### POSSESSION OF CHURCHES AND ISLANDS.

MR. THOMPSON moved that the Report of the Select Committee on the Bill "to amend the provisions of Act IX of 1847 (an Act regarding the assessment of lands gained from the sea or from rivers by alluvion or dereliction within the Provinces of Bengal, Behar, and Orissa)" be further considered in order to the settlement of the clauses of the Bill. The first four Sections, he said, had been passed by the Council. The discussion remained on the 5th Section as regarded the duties of the Collector in laying out roads and paths. The principle had been considered good that if a person should lose his river frontage, he should be entitled to some consideration as regards roads and paths to be laid out, so that he might regain access to the river. Another principle which he (Mr. Thompson) wished to see determined was that the duty of laying out these roads and paths should only be required of the Collector in cases where the Government was directly in possession of the land, or was in possession through some sub-tenant holding under temporary settlement. Where the Government had permanently disposed of its interests, it could not be right to impose upon it any such duty.

THE ADVOCATE-GENERAL said, when this Section was last under consideration, it would be in the recollection of the Council that he proposed

to move four Clauses in substitution of the one Clause which the hon'ble mover of the Bill proposed to introduce by way of amendment. Those Clauses had since been in the hands of hon'ble members. In framing them, he (the Advocate-General) certainly proceeded on the principle that the right of the riparian proprietor to apply to the Collector for the purpose of having fresh access given to him to the river should not be limited to such period as the island or chur should continue in the possession of the Government as Government property. But it had since been stated to him, by an authority of much more knowledge than he could have on the subject, that, practically, there could be a necessity of giving this power to apply to the Collector for the construction of paths and roads, only during the time the island should remain in the immediate possession of Government. It had been found that, as regarded temporary settlements, the Government could always protect the interests of the adjoining proprietor by inserting a provision respecting the construction of such paths and means of access as might be necessary in consequence of the island becoming ultimately attached to the mainland. And when, after taking possession, the Government absolutely disposed of the island, he understood that hitherto it had been the practice in all such cases to leave the proprietor or proprietors of the riparian mainland, in the event of the island becoming attached, to make such settlement as they best could, and on such terms as they could, with the proprietor or proprietors to whom the Government had disposed of their interest in the island, and that no complaints had been made or difficulties arisen in consequence of that practice. And therefore, recurring to the limitation which the hon'ble mover of the Bill had inserted in the Section which he proposed, he (the Advocate-General) should move, as his first amendment in his motion, that what now stood in the printed paper as Clause (a) should be introduced with a slight alteration, which would make the Section run thus:—

"Whenever an island, possession of which shall have been taken by Government under Section III of this Act, shall become attached to the mainland, any person having an estate or interest in any part of the riparian mainland to which such island may become attached while it is in the possession of the Government, may apply to the Collector to take measures for the construction of paths and roads on the island."

The motion was agreed to.

THE ADVOCATE-GENERAL said, he then proposed, as he was informed that it was necessary for the protection of the Government that security should be given for the necessary expenditure of constructing the roads and paths applied for, to follow up the Section just carried by the following:—

"Thereupon the Collector may require the applicant to make such deposit of money as to the Collector shall seem sufficient, and on such deposit being made, the Collector shall proceed to lay out and construct such paths and roads in and through the island as he may deem necessary for securing access to the river or sea from the island to which the island may have become attached."

BABOO RAMANATH TAGORE said, that if the amendment became law, he feared that no zemindar would ever apply for the construction of a road when he knew that he should have to pay a

certain sum of money for its construction, and the consequence would be, that the poor villagers would suffer by it, for they would be deprived of their ancient right to the river frontage, and the manifold advantages they derived from it. Was it reasonable or equitable that the poor villagers should be deprived of the access they had to the river from time immemorial, because the zemindar did not think proper to apply for a road?

Besides, he thought it was a false economy on the part of the Government to ask the zemindar to pay for the construction of roads, because it was certain that roads and canals were the chief means of promoting commerce and trade. He therefore thought it was the duty of the Government to encourage the construction of roads and canals, and whether the zemindar applied or not, it was the duty of the Government to incur the expense.

Under those circumstances, he was of opinion that this Clause, which required a deposit to be made by the zemindar, should not be inserted in the Bill.

BABOO PEARY CHAND MITTRA said, the amendment before the Council might read very well on paper, but he very much feared that, practically, it would not be found a good working provision; and for this reason, that the opening of roads was left to the application of the zemindar or riparian proprietor. The question was—would every zemindar, situated as a riparian proprietor, apply to the Collector for the construction of roads? It was possible that there might be large-minded zemindars who, for the good of their tenantry, might think of constructing roads at their own expense; but he doubted much whether, generally, any application of the kind would be made. He had at morning been told that no application of that kind had ever been made to the Board of Revenue, and therefore, if the construction of a path was made contingent on the application of the zemindar, the application would never be made, and the people would in consequence suffer. It was therefore necessary that due provision should be made, by which facilities should be given for the construction of paths for the promotion of intercommunication and commerce, and the accommodation of the people inhabiting the adjacent places.

MR. KNOWLES said, he certainly agreed with the last two speakers. He was certain that the last three Clauses of the amendment before the Council would make the present Section inoperative. In many cases not only would the applicant be benefited by the roads that would be constructed, but the public generally. It would therefore be hard to call on the applicant, not only to pay all the expenses, but to lodge them beforehand. He (Mr. Knowles) thought that, instead of the last three Clauses of the amendment, a short Clause should be introduced, providing that the costs should be divided between the applicant and the occupier of the new island, at the discretion of the Collector.

MR. THOMPSON said, if it was the intention of the learned Advocate-General to press for the adoption of the third Section of the amendment, of which he had given notice, he (Mr. Thompson) would agree in the remarks of the last speaker.



He did not not think, under the circumstances, that any one would come forward and deposit money. But he believed it was intended to withdraw the third Section on the paper, which referred to the payment of compensation for taking up the land for the road. If the present motion was carried, the application would have to be made while the island was in the possession of Government. The land for the road would be given by the Government, and merely the expense of construction would fall on the applicant; and it seemed to him only a fair provision that the expenses necessary for carrying out the desire of the applicant, which was mainly for his own benefit, should be defrayed by him. If the third of the proposed Sections, providing for the payment of compensation for the land taken up for the construction of the road, was omitted, the expense would be considerably lessened, and the chief objections of some of the hon'ble members would cease. As long as the island was in the possession of the Government, they should, he thought, give the land for the public road. If the island was settled with sub-tenants, a Clause could be easily inserted by the Revenue Authorities that the settlement was made subject to the taking up of any land required for laying out roads, and all that would be required from the applicant would be a deposit of the sum required for constructing the road. He (Mr. Thompson) had been told that, practically, no difficulty had ever been found where an island had become attached to the mainland. A truck across the chur always secured to the water, and soon became as serviceable as most roads in the Mofussil for public traffic.

Mr. SUTHERLAND said, he thought the Clause obliging the riparian proprietor to apply for a road, and to deposit for its construction, must defeat the object in view. He was of opinion that the duty of providing roads should rest with the Government. It was sufficiently hard for the poor people to be suddenly shut out from the river; and as Government was the chief beneficiary in the transaction, he thought the expense should fall on it.

After some further conversation, the Section was passed after the following words had been added to the previous Section:—

"The costs thereof to be equally divided between the applicant and the Government."

The ADVOCATE-GENERAL said, in moving the next Section, he thought it unnecessary to make any observations regarding the objections which had been taken, because by the amendment adopted, the expense to the extent of one-half was not to fall on the applicant. The first Section never intended to apply to the case of the continuation of public roads, which, in consequence of an island having become attached to the mainland, had become useless. He understood that the whole subject had reference to the case of the neighbouring proprietor who, for his own purposes and benefit, required means of access to the river. As regarded other cases, where it was necessary to continue public roads that would not come under the Section, he presumed that in such cases such action as was necessary would be taken by the Government with regard to the general mode of improving the communications of the country. He understood the Section to apply to the case where, for reasons of his own, the neighbouring proprietor desired that he should have opened for him an access across the chur to the river. He (the Advocate-General) thought it was quite concession enough that the expense of making the road or path should be divided between the Government and the applicant; and he thought it was only safe that the applicant should be required to make deposit to meet his moiety of the expense. The Section which he proposed ran thus:—

"In every case the applicant shall be liable to pay and make good to the Government one-half of the costs of laying out and constructing such paths and roads as aforesaid, and any moneys due from the applicant under the provisions of this Section, may be deducted and retained by the Collector out of the deposit so made by the applicant as aforesaid."

The motion was agreed to.

Section 6 and the preamble and title were agreed to.

The Council was adjourned to Saturday, the 6th June.

### Agricultural Instruction in Normal Schools.

From W. S. ATKINSON, Esq., Director of Public Instruction, to the Secretary to the Government of Bengal,—(No. 1726, dated the 15th April 1867.)

I HAVE the honor to forward herewith, for the orders of Government, a letter dated 26th February, from Hurrymohun Mookerjee, submitting a plan for the introduction of agricultural instruction in Normal Schools, together with a copy of letter on the subject (No. 143, dated 15th April,) from the Inspector of Schools, Central Division. At present I have only to remark that I know of no one in the least degree competent to undertake the duty of organizing and carrying on a system of agricultural instruction such as is proposed by the Baboo, or any similar scheme. I shall not, however, lose sight of the subject, which is one of undoubted importance, and shall be prepared to take it up whenever a practicable plan can be devised which promises successful results.

From H. WOODROW, Esq., M. A., Inspector of Schools, Central Division, to the Director of Public Instruction,—(No. 149, dated the 15th April 1867.)

In forwarding my opinion on the accompanying proposal, it is proposed that there should be one Professor of Botany, and at each of these Normal Schools one teacher of the same subject, and that for the teacherships Normal School pupils should be appointed. I gather from this that the present teacher assumes that he will himself be the Professor, and he modestly leaves the Professor's salary undetermined. See letter of the 26th February.

The estimate of Rupees 302, as the expenditure arises from the omission of the Professor's salary, and from the assumption that the Calcutta Normal School can be taught without any expense whatever at the Botanical Gardens, which will not be possible. My objection to the plan is, that I know no one who would do for the post of Professor. Baboo Hurrymohun Mookerjee evidently expects the post, but he is disliked in his class, and in a recent case I would be obliged to say that I was much dissatisfied at his conduct. I am not myself sufficiently versed in Agricultural Science and Botany to give him an examination. I should, however, be much obliged if you would ask Mr. Clarke, when it suits his other arrangements, to come to Calcutta on duty and to give the Baboo a *viré rore* examination; or, if Mr. Clarke cannot come for several months, that he would send a set of questions to be answered in writing. The questions should be such as could be answered without hesitation, and without lately consulting books by a man who thinks himself fit to be the Professor of agricultural instruction, and who for three years has been set apart for the sole duty of teaching Botany and Agriculture at the Calcutta Normal School, and who for several years was a teacher of young ladies in the Botanical Gardens.

From BABOO HURRY MOHUN MOOKERJEE, Seclapore, to the Hon'ble A. EDEN, Secretary to the Government of Bengal,—(dated the 26th February 1867.)

ADVERTING to your letter No. 298 of date the 16th January 1866, I have the honor to submit herewith a plan for the introduction of agricultural instruction in the Normal Schools of Bengal for the consideration of His Honor the Lieutenant-Governor of Bengal. The outlay necessary for the experiment is so small,\* that I entertain a hope that His Honor will see fit to sanction its trial for a time to test the advantages likely to be derived from it.

• *Memorandum.*

1 Professor.	Rs.
8 Assistants, at Rs. 40 each	320
20 Schoolships, at Rs. 4 each	80
2 Head Mollies, at Rs. 20 each	40
4 Bullocks, at Rs. 12 each	48
4 Laborers, at Rs. 6 each	24
Contingent expense Rs. 20 for each garden	40
Total	382

#### *A plan for agricultural instruction in the Normal Schools of Bengal.*

As there is no particular body among the natives to receive agricultural instruction, it is not necessary to establish a separate college or school for that purpose exclusively; it is desirable, however, to organize classes in certain schools.

2. At first it would be necessary to introduce agricultural instruction in the Normal Schools of Calcutta, Hooghly, and Dacca to prepare a body of teachers.

3. For this purpose a Professor of agricultural instruction will be required, who will have to attend the three Normal Schools, and inspect the classes that are to be subsequently formed in other schools.

4. Under the Professor there should be three Assistants to act as teachers in the three Normal Schools. Successful students from the present agricultural class in the Calcutta Normal School may be employed on this work.

5. The lectures should be open to all and delivered in Bengali.

6. The subjects of study should be Botany, Agricultural Chemistry, Agriculture, and Horticulture.

7. It is desirable that at least ten students in each Normal School should be encouraged with an additional scholarship of 4 Rupees each. Such scholarships are to be awarded to the most proficient, and those who are naturally inclined to learn Agriculture. The cost on this account will amount to Rupees 120 monthly.

8. When these students become teachers, they should be entitled to an allowance of Rupees 20 monthly, in addition to the ordinary pay of a teacher. Their duty should be not

only to teach their classes in Village Schools, but also to assist the native agriculturists with their advice whenever required.

9. There should be a piece of land attached to each school where an experimental garden may be laid out for the practice of the students, but since it is difficult to procure such a place in Calcutta, I suggest that the students of the Calcutta Normal School may be allowed to attend the Royal Botanical Garden for practical instruction. The amount required for their conveyance to the Botanic Garden will be about Rupees 20 monthly.

10. An experienced mallee acquainted with the Botanical names of plants should be appointed at the other two places, viz., Hooghly and Dacca, for teaching the ordinary routine of agricultural operation in the schools, and laying out gardens according to the plan to be suggested by the Professor of agricultural instruction.

11. Such mallees cannot be had under Rupees 20 each per month.

12. Two bullocks, one plough, some implements, and two labourers will have to be kept in each school-garden, and extra coolies may be required occasionally for agricultural purposes. The price of the two bullocks will be Rupees 50, a plough Rupees 2. The cost of keeping them 24 Rupees a month, and the pay of the two labourers Rupees 12 monthly.

13. The sale proceeds of the gardens will be deposited in the School Fund.

14. The necessary supplies of seeds and plants should be furnished to these gardens from the Royal Botanical Garden.

15. One important desideratum for these schools is a series of class books in Bengalee, containing the elementary principles and practice of Agriculture and Horticulture, Agricultural Chemistry and Botany, in separate volumes, the first of such series was published under the title of *Krisiki Durpan* some time ago; measures should be adopted to bring out its continuation.

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From T. JONES, Esq., Assistant Secretary to the Government of Bengal, to the Director of Public Instruction,—(No. 2123, dated Fort William, the 29th May 1867.)

I AM directed to acknowledge the receipt of your letter, forwarding a proposal from Baboo Hurrymohan Mookerjee for the introduction of agricultural instruction in Normal Schools, and to state that it has been laid before the Lieutenant-Governor.

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From H. L. HARRISON, Esq., Junior Secretary to the Government of Bengal, to the Director of Public Instruction,—(No. 2593, dated Fort William, the 7th June 1867.)

IN continuation of my letter No. 2123, dated 29th ultimo, I am directed to request that you will be so good as to submit a full report on the present system of teaching Agriculture in the Calcutta Normal School, and the result of the experiment. Information on these points is required to assist the Lieutenant-Governor in arriving at a conclusion as to the propriety of extending such agricultural classes.

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From W. S. ATKINSON, Esq., Director of Public Instruction, to the Secretary to the Government of Bengal,—(No. 1657, dated Fort William, the 7th April 1868.)

WITH reference to your No. 2593, dated 7th June 1867, calling for a report on the present system of teaching Agriculture in the Calcutta Normal School, I have the honor to submit, for the Lieutenant-Governor's information, a communication from Mr. Woodrow (with enclosure), dated 8th October 1867, No. A, which gives a full account of the so-called agricultural instruction imparted to our pupil teachers in Calcutta.

2. The whole subject of scientific Agriculture is so obscure and uncertain, and so foreign to the ordinary branches of education with which this department has to deal, that, though I feel the strongest personal interest in the questions connected with it, and in the natural sciences on which it relies, I find myself quite unable to offer any advice of a practical kind for the extension or improvement of what is now attempted. The simple fact is that we are in almost utter ignorance of the facts and principles which we are called upon to teach, and while this ignorance remains to demand that we shall supply such teaching in our schools, is only to insist that the blind shall lead the blind. I do not mean to say that what is now taught in the Normal School is altogether valueless; on the contrary I believe it is, or may be, extremely useful, as tending to awaken and interest the faculties of observation, which are far too much neglected in ordinary school instruction. In this respect, and to this extent, I consider the time devoted to Botany and Vegetable Physiology is well and usefully employed; but in respect to Agriculture proper, the lessons that are given are little likely to bring about any practical results.



3. The only officer of this department who has any practical knowledge of the art and science of Agriculture as pursued at the present day in England is Mr. Clarke, the Inspector of Schools for the South-East Division. He is also an accomplished Botanist, and when he was recently in Calcutta he was consulted on this question, and was requested to examine Baboo Hari Mahan Mukhopadhyay of the Normal School, and test the extent and accuracy of his knowledge on the special subjects which he undertakes to teach. He complied with this request, and reported demi-officially as follows:—

"I examined Baboo Hurry Mohun Mookerjee at considerable length yesterday morning, and am happy to be able to report very favorably of his botanical attainments. I think he is as far advanced as you can fairly expect a Bengali to be, and in some respects he both surprised and pleased me. To proceed to details:

"He said at once that he could name every plant, both cultivated and wild, in this compound. And on trial I found he could name correctly all those which have prominent flowers. I could not name in that way one length of the cultivated plants myself. It is true that to name plants in this way is only an effort of memory and is not the slightest proof of any real botanical knowledge, but it is a most useful accomplishment in a botanist to know by sight a large number of plants; and it proves at all events that the Baboo has paid much attention to the subject for many years.

"The Baboo also, with a plant in his hand, explained, in answer to my enquiries, the differences between *Convolvulaceae* and *Acanthaceae* and gave his reasons for considering the plant in his hand, an *Acanthad*. This was genuine botanical knowledge. He also gave correctly the diagnosis of one or two prominent natural orders; but I should add that he appeared to say it off in rather a set way as though he was repeating the book and was calling to mind plants he had examined.

"The Baboo is very fairly up in the physiological part of the subject and has ground up the book-work carefully. His book, which is well thumb-ed, is Balfour's Text-book of 1840. There has taken place almost a revolution in the physiological part of the science since that date, so that the Baboo is not well up to the latest discoveries; this I think cannot be expected.

"In order to make my report not all rosy, and to put you as far as I can in the same position as myself for judging the Baboo's attainments, I record his worst blunder. He considered *Cyperas rotundus* (a sedge which I picked) to be a grass, and of the grasses themselves he appeared to know very little. Perhaps this was to be expected, as the Baboo has never possessed a microscope, nor even a pocket lens, (which he ought to have, and which would cost Rupees 2 or 3,) and consequently he has never been able to examine grasses and sedges which have minute flowers. But, contra, for a Professor of Agriculture, a knowledge of grasses and sedges is more important than all the rest of Botany put together. Also it is perfectly easy to distinguish a grass from a sedge without examining any minute characters. Also the particular sedge given the Baboo, *viz.*, *Cyperas rotundus* is the pest of Bengal: it grows in every field and in every pasture in the whole kingdom; it is to pull up this that you see in April, May and June, the cultivators squatted each under his umbrella and patiently hand weeding his rice. And if the Baboo could find any way of exterminating, or even largely checking *Cyperas rotundus*, he would do more for Bengal Agriculture than all the lecturers and professors will do for the next century. Nevertheless, the Baboo knew nothing about this plant, but thought it was some grass.

" In conclusion I only repeat my first paragraph. I was on the whole much pleased with the Baboo: he knew far more than I had anticipated of him, and I think the gap between him and a good European botanist is not so great as that between the best Bengalee physician or mathematician, and a good English physician or mathematician. I had considerable conversation with the Baboo on Agriculture, concerning which I merely report that he has read the English books, which inculcate certain generally received theories.

" The reason I report no further is, that being myself a farmer and a florist, I am a total heretic with regard to Agriculture as taught by the scientific men. And it is my opinion, for instance, that in the art of growing rice we have very little indeed to teach the Bengalees. We may bring our engineering knowledge to bear in extending irrigation, &c., but this has nothing to do with Agriculture: and as to our agricultural shows with improved implements, &c., helping them, I am an utter sceptic; I therefore do not consider myself a fair examiner in Agriculture. The Baboo, for instance, was eloquent about manuring for rice. A thoroughly English notion. You can get corn much too strong (it is very easily and very commonly done in England, where the land is good,) and spoil the yield, and I am sure that when there is a fair allowance of rain in Bengal, the rice stands as thick as it should, and that a *very little manure would greatly diminish the yield*. In England, on a piece of real sound land, I have known barley grown eighteen years in *succession* without any manure, except in four or five years, when the barley looked not quite strong enough in the beginning of May; it had a bushel and a half of guano for the acre sown broadcast in showery weather. And this top dressing according to the scientific agriculturists is utterly good for nothing. There was an enormous crop in this field, every one of the eighteen years (never less than six quarters an acre), and a sample always above the average of the year. I believe in corn growing everything depends on having land really *sound* for corn. Then your crop never fails, and you can grow as many corn crops in succession as you please. There cannot be better proof of this than the way rice is grown without any rotation in Bengal,—a fact which always confuses the scientific agriculturists, and which he can only evade, never explain, for it completely disproves his three or four leading axioms. So in Scotland, with an abominable climate, the land in the Lothians and in part of Perth is so thoroughly sound for corn (or potatoes) that the Scotch farmers pay £4 and even £5 an acre rent, and their out-goings are nearly exactly the same as those of the British farmer (*viz.*, labor, rates, taxes), who hardly ever pays more than 30s. an acre for arable.

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4. With very much less knowledge of the subject, I have always entertained the same general opinions as those expressed by Mr. Clarke regarding the application of science to Agriculture; and in this country, at any rate, in which the conditions of soil and climate are utterly remote from those which obtain in the northern latitudes, where the subject has alone been studied, I believe an attempt to teach it would now be premature. If and whenever good books are written, inculcating principles and plans of operation, which stand the test of experience and prove of economic value, the Education Department will gladly do its part in making them known to the people through its schools and colleges. At the present time I believe our knowledge is in too crude a state to allow us to venture further than we have done already.

From H. WOODROW, Esq., Inspector of Schools, Central Division, to the Director of Public Instruction,—(No. A., dated Calcutta, the 8th October 1867.)

I REGRET that in forwarding a report on the present system of teaching Agriculture in the Calcutta Normal School, and the results of the experiment, my own knowledge of the subject is too scanty to enable me to do justice to it. I am therefore obliged to depend greatly on the opinion of others.

The class was examined in December 1865, by Baboo Digunber Mitter and Baboo Rajendra Lal Mitter, but these gentlemen did not send in any report. In December 1866, it was examined by the Reverend J. Long. His report is as follows:—“I have gone carefully over the 79 papers sent me on Vegetable Physiology, viz:—

Hooghly Normal School	....	....	31
Komilla ditto	....	....	20
Calcutta ditto	....	....	25

“While some of the papers were very meagre, and others were diffuse in their answers, not keeping to the direct line of the questions and insisting platitudes, yet I was much pleased with them as a whole, and some entered very fully into the questions of examination. My questions were framed more with the object of drawing at their interest in the subject than in testing each man's special acquaintance. In reading their answers, I have been so much impressed with the utility of the subject brought before those teachers, so important for rural schools, that I should like to see their answers next year made to tell on their standing in the Normal Schools. I shall, if you allow me, be happy to give next year a prize of Rupees 12 to the best paper on Vegetable Physiology, and Rupees 8 to the second best.

“The study must be of future use to the teachers in calling out their powers of observation on common things, and in teaching them to study such questions as manures in a scientific light.”

(2.) I may remark that if Mr. Long had sent the marks, they would have been included in the marks of their respective schools. Though his remarks are general, yet they are on the whole satisfactory, and give a more favorable opinion of the knowledge of the students than I should myself have expressed. There is no stipend allowed in the Normal School for a teacher of Agriculture, but as the Bengali Patshalas, the practising school for the pupil teachers, and the two institutions, are held in one house, and much of the teaching of the Patshalas done by the Normal School, it did not seem improper to allow a master of the Patshala to teach in the Normal School. Baboo Hurry Mohan Mookerjee, an assistant master of the Patshala, on a salary of Rupees 20 a month, has been directed to teach Agriculture in the Calcutta Normal School. He is the only man on such a salary who has any knowledge of the subject. He does not, however, give full satisfaction, for he is not able to preserve discipline in his class, and there was an emente of his pupils a few months ago. He was, in my opinion, so much to blame that he would have been dismissed had he been a regular teacher of the Normal School; but as he was a teacher of one special subject only, he was allowed the consideration given to French Masters and Drawing Masters in English Schools. On the whole, I am far from thinking him a successful teacher. He has written in Bengali a book on Agriculture, called the Krishi Durpan. I have read and epitomized about half of it, but it does not seem to me a good class book.

(3.) In his letter he attributes the want of sufficient success to the following causes:—

1st.—Only two hours in the week given to the study of the subject.

2nd.—No proper class books.

3rd.—No drawings, microscopes, or other appliances to teach the subject.

4th.—No prizes.

5th.—Marks in Botany not counted in the general list at the Annual Examination.

6th.—Want of sufficient means to send the pupils to the Botanical Gardens.

I will briefly consider these objections in the order in which they stand.

(1st.)—Two hours in the week for three years is equivalent to an hour a day for a year. This though not enough to make a student a good botanist, is as large a portion of time as can be spared for an extra subject. If duly improved, it would be sufficient to give the pupil teachers a fair knowledge of theoretical Agriculture and of the first principles of Botany.

(2nd.)—The want of proper class books is a real difficulty, and I strongly recommend that money be given liberally for the preparation of a graduated course of instruction in Agriculture.

(3rd.)—The want of drawings and microscopes was not brought to my notice before. They shall be supplied from the next library assignment, so far as the funds of the Normal School permit. There is already one microscope in the library available for the use of the masters and students.

(4th.)—Prizes are not given in the Normal School, their place being supplied by scholarships or competitive stipend.

(5th.)—The marks for Botany do not count in the general list, because this list contains the marks for subjects common to all the Normal Schools, and Botany is not common to all.

(6th.)—An assignment of 10 Rupees a month, or Rupees 120 a year, is allowed to take the students to the Botanical Gardens. Baboo Hurry Mohan Mookerjee says on this point “practical demonstrations in a public garden are of the utmost consequence, but owing to want of means only a small number of pupils can be sent to the Botanical Gardens at a time.” Ten rupees a month, if properly expended on boats, ought to be enough. The teacher seems to think that a lavish expenditure is essential for efficiency; our students are all poor, and are accustomed to long walks at their native villages.



(4.) Of these six difficulties and hindrances the want of books is the greatest, and I trust that you will take measures to supply it. Drawings and microscopes I will purchase from time to time with the library allowance. Marks shall count in the different schools for Botany, but not in the general list as all schools do not and cannot study the subject. Prizes perhaps may be given, if liberal men like the Reverend J. Long can be found to provide them. I do not recommend in a school for general education that a longer time than two hours a week be given to Agriculture, or that more than 10 Rupees a month be allowed for boats to visit the Botanical Gardens.

(5.) The greatest difficulty of all is omitted by the teacher, and this is the utter want of interest in the subject on the part of the managers of our aided schools. One fact will prove this assertion. Since the Agricultural Class has been opened not one Aided School Committee has asked for a student who knows agricultural Botany. They frequently ask for students with special acquirements. Such as a good knowledge of Sanskrit, or of Bengal Grammar, or of Arithmetic, or of Geometry, but never once has mention been made of a good knowledge of agricultural Botany. The agricultural portion of the people have no faith in new inventions, and till they see with their own eyes that good arises from improved cultivation, and that it does not cost much, they will not interest themselves in the matter.

(6.) They may see the good results of proper cultivation at the Botanical Gardens, but they never think of resorting there for information, as they assume that the means employed are too expensive for them. Again, the market gardeners, who supply the Dhurrumtollah Bazar, sell excellent vegetables, and grow a series of good crops in never ending succession. Examples of first-rate cultivation, with lucrative results, may be seen in numerous gardens within ten miles of Calcutta. Improvement in Horticulture does not seem necessarily to cause improvement in Agriculture. It would, however, be worth while to enquire what these successful gardeners do with their rice fields, if they have any; and if it should appear that they get more from them than is got elsewhere, their improvements should be carefully set forth for general information.

7. Much good might be done, if some one able to handle the subject well could make a tour among these market gardens, and write a small book shewing what was originally the state of the land now cultivated as garden ground, how it was improved, and in what time and at what cost; what crops are now raised on it, in what succession and at what profit; what manures are employed, and how they are obtained or prepared.

(8.) On this information a tale might be written after the plan of the Book on Agriculture, published by the Commissioners of National Instruction in Ireland. The graduated course on Agriculture should contain three Manuals in order of difficulty. The first might be read in the village schools. I again urgently recommend that measures be taken to get such works prepared. The Reverend Mr. Ferninger of Gowhaty has the practical knowledge necessary for the preparation of such a work, and might for a sufficient inducement be willing to write it.

From BABOO HARRY MOHUN MOOKERJEE, to BABOO GOPAL CHUNDER BANERJEE, Head Master, Calcutta Normal School,—(dated Calcutta, the 9th July 1867.)

WITH reference to Mr. Junior Secretary Harrison's letter No. 2593, dated the 7th ultimo, communicated to me under cover of your endorsement No. 25 of the 22nd idem, I have the honor to report that the Agricultural Class of the Calcutta Normal School was opened in the month of June 1867. The pupils of all the three classes of the Normal School are admitted to this class, and are taught through the medium of lectures for an hour twice a week.

The subject of study in this class comprises Elementary Botany, Agriculture and Horticulture. The first is taught by lectures only, there being no class book available in Bengalee. (The lectures, however, are so framed, and the points discussed are so illustrated by the exhibition of specimen, that the want of a class book is to some extent obviated. Opportunity is also availed of every Saturday to take the more advanced pupils to the Royal Botanical Gardens for practical instruction, both instructional and systematic Botany and Agriculture. The lectures on Horticulture and Agriculture are devoted to the study of soils, the modes of improving them, the manures best suited to this country, the system of propagating and multiplying plants, the effect of climate on vegetation, and such other subjects as are generally included under those two heads. In learning these subjects the boys have the aid of a small treatise published by me, and that of certain manuscript notes which are intended for publication, whenever sufficient encouragement shall offer. These notes treat of the whole subject of Agriculture.

The progress made by the boys in this branch of their study is on the whole satisfactory. Most of them have acquired a fair knowledge of the first principles of Agriculture, and enough of Botany to be able to carry on their study of it without further tutorial aid. The Examiners at the annual examinations have always expressed themselves satisfied with the knowledge acquired by the boys in these subjects.

The time has not yet come when the result of the experiment now being tried can be proved to be thoroughly satisfactory. The time allowed for the study of the three subjects taught by me is limited to only two hours a week, and owing to want of class works that cannot be aided by private study. The lectures themselves are necessarily imperfect, owing to the want of illustrative drawings, microscopes and other appliances, and the boys have no incentive to learn beyond a mere love of the subject. No prizes are given for proficiency, and the marks attained by the boys in Botany and Agriculture are not allowed to be counted as a part of the marks attained for general proficiency. Further, in such a practical science as Botany, practical demonstrations in a public garden are of the utmost consequence; but owing to want of means only a small number of pupils can be sent to the Botanical Garden at a time. These causes in a great measure interfere with the efficiency of the Agricultural Class, and in judging of its success, I beg that sufficient allowance may be made for these serious drawbacks.

**Establishment and working of a School for Artizans at Raepore.**

From E. C. BAYLEY, Esq., Secretary to the Government of India, Home Department, to the Chief Commissioner, Central Provinces,—(No. 2197, dated Fort William, the 30th April 1868.)

I AM directed to acknowledge the receipt of your Assistant Secretary's letter No. 1107-116, dated the 10th instant, and in reply to state that His Excellency the Governor General in Council requests you to convey his commendation to the Officers who have succeeded in establishing the School of Artizans at Raepore, and approve of the instructions issued by you to all Commissioners and Deputy Commissioners in the Central Provinces, with a view to the organization of similar Institutions in the other districts of the Central Provinces, and the instruction of prisoners in arts, such as those taught at the Raepore School.

From LIEUTENANT A. BLOOMFIELD, Assistant Secretary to the Chief Commissioner of the Central Provinces, to E. C. BAYLEY, Esq., Secretary to the Government of India, Home Department,—(Nos. 1107-116, dated Nagpore, the 10th April 1868.)

I AM directed to forward, for the favorable consideration of his Excellency the Viceroy and Governor General in Council, copies of the papers marginally noted, on the subject of the establishment and working of a School for artizans at Raepore, and the orders which have been issued by the Chief Commissioner, with a view to encourage the organization of similar Institutions in the other Districts of these Provinces and the instructions of prisoners in similar arts.

Letter from Secretary to the Chief Commissioner, Central Provinces, to Commissioner, Chutteesghur Division, Nos. 2-95-259, dated 17th July 1867.

Half-yearly Report on the Raepore School for Artizans, dated 30th June 1867.

Circular No. 32, dated 10th April 1868, addressed to all Commissioners and Deputy Commissioners.

2. I am to express Mr. Campbell's hope that the Supreme Government may be pleased to confer special commendation on the Officers who have succeeded in establishing the Raepore School, and that the remarks and orders which have been issued by the Chief Commissioner on the subject may meet with approval.

3. I am to add that Mr. Campbell has a very strong feeling as regards trades most frequently taught in Jails. The present practice is to instruct the prisoners in fine trades, such as weaving, &c., which require machinery, and which are never practised for a day after release; whereas, if a man is made a good bricklayer or carpenter, he can easily earn handsome wages and has little temptation to relapse into crime.

From the Secretary to the Chief Commissioner of the Central Provinces, to the Commissioner of the Chutteesghur Division,—(Nos. 2895-259, dated Nagpore, the 7th July 1867.)

I AM directed to acknowledge the receipt of your letter No. 2182, dated 11th July, forwarding Captain Lugard's report upon the working of the Artizans' School at Raepore.

The Officiating Chief Commissioner has perused the report with much interest. He fully concurs in your estimate of the usefulness of the Institution; and he considers that much credit is due to Captain Lugard, who founded the School, and to whose tact and care its success is undoubtedly due.

Mr. Morris trusts that Captain Lugard will endeavor to establish a similar School at Belaspore, whither he has now gone. He is sure that no efforts will be wanting on the part of Captain Twyford to further the interests of the School, which has now, the Officiating Chief Commissioner hopes, been firmly established at Raepore.

As the subject of Captain Lugard's report is of much general interest, its publication as a supplement to the local Gazette has been ordered.

*Half-yearly Report on the Raepore School for Artizans, 30th June 1867.*

From CAPTAIN H. I. LUGARD, Assistant Commissioner, to the Deputy Commissioner, Raepore.

AGREEABLY to your suggestion I have the honor to submit the following report on the working of the Raepore School for Artizans for the half-year ending 30th June 1867; and this being the first report on the School, I would premise it with a few remarks showing how the School came to be established, and the means taken for its establishment.

The Nagpore Exhibition first opened my eyes to the lamentable want of manufactures in the District, and the census showed me that in the whole District there were only about 200 carpenters, and a proportionate number of other skilled artizans; while in the Nagpore, Jabulpore, and Nerbudda Divisions they were numbered by thousands; and again, when wells were begun to be dug all over the District the want of means was severely felt. It was evident that the subject required

Want of skilled labor.

to be taken ~~in~~ hand, and accordingly a scheme was submitted to the Chief Commissioner for the opening of a Central School for the instruction of artizans in carpentry, pottery, masonry, and iron work. The scheme was approved of by Mr. Temple, and a grant allowed from Local Funds of the Raepore and Belaspore Districts, and premises were placed at the disposal of the Committee.

The scheme, as it originally stood, was that malgoozars should be induced to send in their carpenters, lohars, potters for six months' instructions, supplying them with food the while, and that we should provide tools, materials, and instructors, and reap the benefit of any work they might turn out.

#### Instructions.

But in carrying this scheme on to a practical issue, it was found that the following difficulties arose:—

1st.—Malgoozars could not spare their existing carpenters and lohars and potters for six months.

2nd.—The men themselves had received their annual supply of grain, and could not afford to bring it in, and had no place to store it, and could not afford house rent.

3rd.—The premises placed at our disposal was the old Jail, and the men did not care to come to it.

4th.—The few who did come were so old and decrepid as to admit of no hope of their improving to any material extent.

#### Remedial measures.

To obviate these difficulties, we were obliged to alter the scheme as follows:—

1st.—Instead of getting in the village artizans, we sent for young ordinary laborers and taught them *de novo*.

2nd.—We paid them two annas a day subsistence allowance.

3rd.—We white-washed the walls of the old Jail and wrote on them in large letters in Hindue—"Schools for Artizans."

4th.—We quietly dismissed the decrepid old artizans and kept none but lusty and young men.

The effect of this change in our plans was soon apparent, pupils have flocked in; and now that they find their subsistence allowance regular, and that their wants are all cared for, they are only too ready to stay, and we could get any number.

Having thus briefly sketched the origin and establishment of the Institution, I will now proceed to treat of its present state, and in doing so I would divide the subject into the following heads:—

#### Present state of the Institution.

1st.—Popularity of the scheme.

2nd.—Financial condition.

3rd.—Administration.

4th.—Stock, &c.

5th.—Market for sale, &c.

6th.—Details of School.

7th.—Conclusion.

From the first the malgoozars of the District have warmly supported the scheme. They

#### 1st.—Popularity of the scheme.

had but one artizan to about 20 villages, and they wanted one at least to every ordinary village. They were slightly lukewarm when told to send in their artizans; but when the original plan was modified and laborers only were called for they were delighted. They wanted to increase the number, not to improve the efficiency, of their artizans, and they saw that by the present arrangement their object would be attained. They all subscribed willingly; and when they came into the *Sudder*, to attend the sale of waste lands, they came in large numbers with the Deputy Commissioner to visit the School, and professed great interest in it. The European community also exhibit considerable interest to the institution, especially in the pottery branch.

The financial condition of the School is very prosperous. Subscriptions have flowed in freely, and with the assistance of the authorized aid grants from Local Funds a sum of Rupees 2,418-6-8 has been collected as shown below. A large portion of this has been judiciously laid out in the purchase of timber during the last six months, when timber was cheap and plentiful. Already the value of this timber has increased two-fold, and there is every probability that ere six months more have elapsed it will increase four-fold; a large sum has of course been expended in tools and also in the establishment and commencement of work in the pottery branch. The following statement shows the present condition of cash account:—

Subscriptions from Malgoozars, viz. :—				Rs.	As.	P.	Rs.	As.	P.	
Raepore Tehsil	...	...	...	...	550	8	0			
Dhumterry "	...	...	...	...	296		0			
Droog "	...	...	...	...	508	0	0			
Simgah "	...	...	...	...	122	0	0			
					<hr/>			1,556	8	0
Grants-in-aid from Local funds, viz. :—										
Raepore	..	..	...	...	516	10	1			
Belaspore	...	...	...	..	233	5	4			
					<hr/>			750	0	0
Miscellaneous collections				..	...	...		141	14	4
					<hr/>					
					Total			2,447	6	8



EXPENDITURE.

			Rs.	As.	P.
Cost of carpenters and smiths' tools from Calcutta	..	..	515	2	9
" " " from Bombay	..	..	28	8	0
" " " country-made	..	..	89	8	6
Pay of Superintendent and establishment	..	..	109	12	11
Cost of importing an instructor in pottery from Madras	..	..	217	0	0
Outlay in purchase of timber	..	..	1,081	11	5
" charcoal	..	..	40	0	0
" bullock's hides	..	..	15	8	0
" bamboos, poles, &c...	..	..	75	0	0
Total expenditure	..	..	2,171	14	7

Leaving a balance of cash in hand amounting to Rupees 276-7-11; and this balance is continually increasing as the stock gets used up and charged off at the market rates, and thus a surplus fund is formed for the purchase of fresh stock when timber becomes cheap again in January or February next. In this manner it is proposed gradually to make the Institution self-supporting. The stock which in our accounts represents a sum of Rupees 1,200 is in reality worth at the present moment at market rates upwards of Rupees 3,500. The teak timber, which was bought at less than 8 annas a cubic foot, is worth a Rupee a foot; the bamboos which were bought at Rupees 3 a 100, are now not to be had for Rupees 12 a 100, and so on. The apprentices are now engaged on all kinds of work, and their pay is charged against the work on which they are employed. The labor of the 1st and 2nd classes is very cheap at two annas a day; that of the 3rd class is fair; and that of the 4th class, who are only beginning to handle the bussola, is rather dear; but on the whole, the labor of the apprentices is fairly remunerative. It does not form an item in the debit and credit account, because, as I stated above, their labor is charged against the work on which they are employed.

A sketch of the original scheme, and of the modifications since introduced, has been given in the 2nd and 3rd paragraphs of this report, it only remains to notice the minor details of administration. The

3rd.—Administration.

premises were placed at my disposal on the 20th February 1867, and I secured the services of Mr. Parker, the late Jailer of Raepore, as Superintendent, on Rupees 50 per mensem. Mr. Parker is a first-rate mechanic, both in the carpentering and smith's line, but he was discontented with the pay, and I found he neglected the pupils, to make up fancy-work of his own for private sale. I therefore got rid of him and kept the immediate supervision in my own hands. A Native maistry on Rupees 15, and eight experienced Native carpenters, constitute my present staff of instructors, and their pay is charged against the work turned out. The pupils learning carpentry are divided into four classes, and each class occupies a separate compartment of the long barrack. The 1st class is taught by the maistry himself and one carpenter, the 2nd class is instructed by two old carpenters; the 3rd class by two old carpenters; and the 4th class, which is by far the most numerous by three old carpenters. A tool chest is provided for each class except the 4th, the pupils of which are all furnished with the bussola or adze. A daily register of attendance and of work done is kept up, and the pupils are encouraged to compete with each other for advancement into the higher classes.

On the first establishment of the School I wrote to Dr. Hunter at Madras to send me an instructor in pottery, but unfortunately he had proceeded on a tour towards Lahore, and consequently I did not get the pottery instructor till the end of May. A class of eight pupils was at once started; a pit for the mixing and tempering of the clay was built, and the men were taught first of all to choose and mix their own clay; a number of Native potters were also employed and taught improved methods of manufacture of tiles, bricks, &c. Letters were written to the Tehsildars and the Native gentlemen of the District, requesting their assistance in the search for good clays, porcelain earths, and granite, quartz, felspar, flint for mixing with the clay,—and some degree of success has already crowned our efforts in the space of only one month; we have found quartz, flint, colored earths, kaolin, and clays in abundance, and are now turning out rather superior ware. The young pupils are beginning to be taught to use the wheel, and to work on the bench in a proper manner, and as they progress fresh classes will be formed.

Mr. Jones, the pottery instructor, has brought up a number of useful books with him, and with the aid of these some degree of supervision and control is kept over the work.

The smiths are taught to make up tools in the country fashion, so that hereafter when the young carpenters go out to their villages they may have men who can make up fresh tools for them, or mend old ones without their being put to the trouble and expense of coming into head-quarters.

All the building work required within the premises, such as construction of pits, furnaces, alterations of building, &c., are done with the assistance of the apprentices, so that they may learn to build; and the tiles of all the barracks were turned to teach them that art, and thus every occasion is taken to make them eventually handy and able artizans.

Appended is a statement of the receipts and issues of stock during June, which shows also the balances in hand at the close of the month, and which may be roughly valued at Rupees 3,500. Column 3 of the statement shows the purchases made of timber, &c., and also the work turned out in the pottery department; column 5 the amount of materials expended and charged off. Almost all the flitching grass and kakum have been expended in making huts for the apprentices, as we found that unless we took care of them and made them comfortable they invariably absconded.



# SUPPLEMENT TO The Calcutta Gazette

WEDNESDAY, JUNE 17, 1868.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.*

### Proceedings of the Council of the Lieutenant-Governor of Bengal for the purpose of making Laws and Regulations.

Saturday, 6th June 1868.

#### Present:

HIS HONOR THE LIEUTENANT-GOVERNOR OF BENGAL, *Presiding.*

T. M. COWIE, Esq., *Advocate-General*,  
H. L. DAMPIER, Esq.,  
E. T. TREVOR, Esq.,  
A. R. THOMPSON, Esq.,  
S. S. HOGG, Esq.,  
KUMAR HARENDRA KRISHNA, RAI BAHADOOR,

BAROO RAMANATH TAGORE,  
H. KNOWLES, Esq.,  
BAROO PRARY CHAND MITTRA,  
T. ALCOCK, Esq.,  
H. H. SUTHERLAND, Esq.,  
KUMAR SATTANUND GHOSAL.

#### POLICE AND CONSERVANCY OF HASTINGS.

Mr. Hogg moved for leave to bring in a Bill for subjecting the southern portion of Hastings to the provisions of the Municipal Acts of Calcutta. He said, the land on which the town of Hastings was built, belonged to the Government, and the house-holders and residents had hitherto simply paid a low rate of rent for the occupation of the land, and had never been subjected to any local tax for conservancy, lighting, police, and other charges for the advantage and improvement of the place. The object of the present Bill was to impose on the residents of Hastings the same Municipal laws, regulations, and taxes which now prevailed in Calcutta. When Act VI of 1863, which was the first Municipal Act for Calcutta enacted by this Council, was passed, it included all the places within the local limits of the ordinary original civil jurisdiction of the High Court. Consequently Hastings, then called Cooley Bazar, Fort William, and the Esplanade, were included within the Town and subject to all the provisions of Act VI of 1863. But by Section 46 of that Act, houses, buildings, and lands situate in Fort William, on the Esplanade of the Fort, and in Cooley Bazar, were exempted from the house-tax. Notwithstanding the passing of that Act, which evidently intended that the con-

servancy arrangements for the places mentioned should be made over to the Corporation of Calcutta, Government continued the direct management, through the Commissioner of Police, of those places, and up to the present time had always borne all the expenses.

When last year the Municipal Act was undergoing some amendments, it was suggested that as the Government had not thought proper to make over the municipal administration of Hastings to the Town, it would be wise to recognize the state of affairs which actually existed; and by Section 22 of Act IX of 1867, Fort William, the Esplanade and Cooley Bazar were declared not to be within the meaning of the word "Town," as defined in Act VI of 1863, and used in all the Municipal Acts for Calcutta. Now, however, Hastings was gradually increasing in size, and demanded a more costly system of conservancy arrangements than had hitherto existed, and the Government not being prepared to incur the increased expenditure, and considering that the people who resided in the place should be subjected to the same local taxation as existed in other parts of India, it was proposed to impose on the people taxes sufficient to cover all the expenses incurred on account of them.

That might be done by forming Hastings a separate Municipality, or by extending the provisions of the Calcutta Municipal Acts; but, although extending in size, Hastings was not yet sufficiently large to warrant a Municipal constitution being given to it alone. It was therefore suggested to bring Hastings under the provisions of the Municipal Acts of Calcutta. It would be observed that the Bill proposed to extend the Acts simply to the southern portion of Hastings. That would require some explanation. When the Government of India intimated that they were prepared to make over Hastings to the Civil Authorities, they stated that that portion north of Clyde Row would remain under the direct control of the Military Authorities, because the only buildings in that portion of Hastings were the Conductors' Barracks and Commissariat godowns, which were under the control of the Military Authorities, and therefore could not conveniently be subjected to the Municipal Acts in force in Calcutta. The expense for the repairs of roads and lighting in that portion of Hastings were now, and would still be, borne by the imperial treasury. It was therefore proposed to extend the provisions of the Calcutta Municipal Acts only to the portion of Hastings lying south of Clyde Row.

The motion was agreed to.

MR. HOOG applied to the President to suspend the rules for the conduct of business.

THE PRESIDENT having declared the rules suspended—

MR. HOOG moved that the Bill be read in Council.

The motion was agreed to, and the Bill read accordingly.

MR. HOOG applied that the further consideration of the Bill be postponed until the next meeting of the Council.

The application was agreed to.

#### POSSESSION OF CHURCH AND ISLAND.

MR. THOMPSON moved that the Bill "to amend the provisions of Act IX of 1847 (an Act regarding the assessment of lands gained from the sea or from rivers by alluvion or dereliction within the Provinces of Bengal, Behar, and Orissa)" be passed.

The motion was agreed to, and the Bill passed.

#### POLICE AND CONSERVANCY OF TOWNS.

MR. DAMPIER moved that the Report of the Select Committee on the Bill "to amend and consolidate the law for the regulation of Police in Towns under the control of the Lieutenant-Governor of Bengal, and for the conservancy and improvement thereof," be further considered in order to the settlement of the clauses of the Bill.

The motion was agreed to.

The postponed Section 49 provided the nature of the tax to be levied.

MR. DAMPIER moved that the word "occupation" be substituted for the word "house" in the 11th and 13th lines.

BABOO PEARY CHAND MITTRA stated that the principle of assessing houses, and not individuals, had already been disposed of by the Council; and if the present motion were agreed to, it would lead to complications, inasmuch as the inmates

house itself, would be thought the word stained.

He said, he did not intend to use the word "occupation" in the sense suggested by the hon'ble member. He meant it to include warehouses, stables, gardens, tanks, &c., enumerated in Section 8. If there was any ambiguity in the word "occupation," which was suggested by the learned Advocate-General; he would have no objection to substitute any other term which would better express the intention.

After some conversation, the word "holding" was substituted for the word "house."

BABOO RAMANATH TAGORE said, he should bring to the notice of the Council that a petition from the inhabitants of Moorshedabad, Berhampore, and Sydadabad, had been received, complaining of the increase of the maximum of taxation from Rupees 5 to Rupees 10. The petitioners thought the increase would prove very burdensome to the inhabitants of those and other places to which the Bill might be applied. The Council must be aware that originally the maximum amount stood in the Bill at the pay of a chowkeydar of the lowest grade, but after consideration the Select Committee fixed the sum at Rupees 5, because less than that amount would not be sufficient for a chowkeydar, and the maximum of taxation would remain very uncertain if no definite amount was fixed. The Committee hardly thought that the question would be a matter of discussion in the Council. Unfortunately, however, the hon'ble member on his left (Baboo Peary Chand Mittra), in order to prevent one evil, fell into another; that was to say, he moved to increase the maximum assessment from Rupees 5 to Rupees 10, to avoid the evil and uncertainty of there being no limit whatever, as was proposed by another hon'ble member. He (Baboo Ramanath Tagore) thought that, taking into consideration all the circumstances detailed in the petition received by the Council, the maximum of Rupees 5 should be restored, and by doing so the Council would not be conferring any favor on the tax-payers, because the Select Committee had, after due consideration, fixed that sum as the maximum. Thinking, therefore, that Rupees 5 was an adequate maximum, and that the maximum of Rupees 10 would prove a hardship to many, he would move that Rupees 5 be substituted for Rupees 10 in the Section.

THE PRESIDENT said, he would suggest that the hon'ble member should modify his amendment. The present discussion was in continuation of the previous one. The amendment proposed was simply a negative of the amendment moved and carried at the last meeting, and could not therefore be put.

BABOO RAMANATH TAGORE then moved that Rupees 7 be substituted for Rupees 10.

BABOO PEARY CHAND MITTRA said, he had proposed Rupees 10 as the maximum, because he was anxious that the rate should not be left uncertain, as it would have been if the motion of the hon'ble member on his right (Mr. Hoog) had been carried. But as it now appeared that it was likely not to work well, and to prove a hardship, he (Baboo Peary Chand Mittra) would support the amendment.

The Council then divided—

Ayes 7.

Noes 6.

Koomar Satyanand Ghosal.  
Baboo Peary Chandra Mitra.  
Baboo Ramanath Tagore.  
Koomar Harendra Krishna.  
Mr. Thompson.  
Mr. Dampier.  
The President.

Mr. Sutherland.  
Mr. Alcock.  
Mr. Knowles.  
Mr. Hogg.  
Mr. Trevor.  
The Advocate-General.

The motion was therefore carried, and the Section as amended passed.

On the motion of Mr. DAMPIER, the following Section was introduced after Section 59, instead of Section 55, which had been previously transposed to that place:—

"Whenever the period for which any assessment is valid, as provided in Section 59 of this Act, shall be about to expire, notwithstanding anything hereinbefore contained, it shall be lawful for the Magistrate, instead of requiring any Town Committee or Ward Committee to make a new assessment or to revise and amend the assessments then in force, to adopt the said assessment as the assessment for the year next following."

The postponed Section 60 having been read—

Mr. DAMPIER said, by the Bill as printed the assessment was good for one year, and until another was made. Then Section 60 provided that if for three months, either through the lapses of the Town Committee or the Magistrate, or for any other reason, no new assessment had been made, then the old assessment should hold good. But at the last meeting of the Council an amendment was carried, to the effect that an assessment once made, should ordinarily hold good for three years. It was therefore necessary to make a change in the wording of the present Section to provide for the old assessment holding good after the expiration of the third month of the fourth year, instead of after the expiration of the third month of the second year.

On the motion of Mr. DAMPIER, amendments were then made, which made the Section stand thus:—

"If the new assessment be made and published before the expiration of the first three months of any year for which no assessment valid under the provisions of Section 59 shall be in force, the assessment which was in force at the close of the preceding year shall be deemed to be the assessment for the current year."

The following Section was, on the motion of Mr. DAMPIER, introduced after the above:—

"As soon as possible after an assessment shall have been adopted under Section 59a, or shall have taken effect for the current year under the last preceding Section, Magistrate shall, in the manner provided in Section 59, give public notice that the copies of the list of assessment have been hung up and deposited, give public notice that the assessment in force at the close of the preceding year will continue to have effect during the current year, but it shall not be necessary to hang up fresh copies of such list, and every person whose assessment may be so continued shall be at liberty to appeal against such assessment as if it were a new assessment made upon him."

The postponed Section 61 provided for appeals from assessments, and commenced thus:—

"Any person assessed, who shall be dissatisfied with his assessment, may appeal &c."

Mr. DAMPIER moved the substitution of the words "who shall have been assessed by a Town Committee, and" for the word "assessed" in the first line. He said, the object of the alteration was to give a new Section which he proposed to

introduce after the present Section, was that an assessee should have no right of appeal to the Magistrate where the assessment was made by a Ward Committee. Where the assessment was made by a Town Committee without the intervention of a Ward Committee, the appeal was, as in the present law, to the Magistrate, whose decision was final. He proposed to provide for that in this Section. But in the following Section, where the Ward Committee would make the assessment in the first instance, the right of appeal would lie to the Town Committee at a Meeting, and in that case the final decision would rest with them, and there would be no appeal to the Magistrate.

The motion was agreed to.

On the motion of Mr. DAMPIER, the proviso at the end of the Section was left out, and the Section as amended agreed to.

The following Section was then inserted on the motion of Mr. DAMPIER:—

"Any person who shall have been assessed by a Ward Committee, and who shall be dissatisfied with his assessment, or who shall dispute his occupation of any property or his liability to be assessed, may appeal on unstamped paper to the Town Committee. And with regard to such appeals the Town Committee, at a Meeting, shall proceed as the Magistrate is directed to proceed in the last preceding Section, and the orders passed by the Town Committee at a Meeting on such appeals shall have the same effect and finality as orders passed by the Magistrate under the last preceding Section. Appeals to the Town Committee at a Meeting shall be subject to the same limitation of time as appeals to the Magistrate under the last preceding Section."

The postponed Sections 62 and 63 were passed with verbal amendments.

The postponed Sections 64 to 66 were agreed to.

The postponed Section 5, providing for the formation of unions, having been read—

Mr. DAMPIER said, when the question of omitting this Section was first mentioned, he had said that he would agree to it if the rest of the Bill was passed as it stood; that was to say, if no alteration was made that would affect the Bill as regards the extent of the places or towns to which the provisions of the Bill might be extended. He should therefore be glad if the President would allow the consideration of this Section, as well as of Section 6, to stand over till all the other Sections had been passed.

The consideration of the Section and of Section 6 was then postponed.

The postponed Section 10 was agreed to, and Section 11 was passed with a verbal amendment.

The postponed Section 16 provided for the preparation of estimates.

Mr. DAMPIER moved the substitution of the words "after consulting" for the words "in consultation with." The object of the amendment, he said, was to meet the objection of the learned Advocate-General that otherwise some definition would be necessary as to how it was to be decided if the members of the Town Committee differed from the Magistrate. As he (Mr. Dampier) had already explained, in the body of the Bill the Town Committee were a consultative body only; the Magistrate was to have the benefit of their advice, but the responsibility would rest with him. If the wording was altered as now proposed, there would be no longer any doubt as to the meaning.

The motion was agreed to, and the Section as amended read.



The postponed Section 17 was passed after a verbal amendment.

MR. DAMPIER said, he would now move two amendments in Section 46, with the view of simplifying the Section. The principle asserted in that Section was that the Government would have power to vest the Town Committee, or the Town Committee at a Meeting, with the powers of the Magistrate as defined in certain Sections of the Bill. Instead of cumbering this Section with a long list of numbers, he proposed to substitute for them the words "as enumerated in Schedules J and K to this Act annexed." It was impossible to draw up the Schedules until the Bill had been finally settled; but the principle being affirmed, the Schedules alone would remain to be passed.

The motion was agreed to, and the Section as amended passed.

The interpretation, Section, the consideration of which was postponed, was then passed with a few verbal amendments, and the omission of the Clause defining "arable lands."

Section 5, regarding the formation of unions was then, on the motion of Mr. Dampier, omitted, and Section 6 was passed with verbal amendments.

The postponed Section 92 was passed with the change of the short title from "The Mofussil Towns Act" to "The District Towns Act."

The further consideration of the Bill was postponed.

#### RECOVERY OF ARREARS OF REVENUE AND PUBLIC DEMANDS.

THE ADVOCATE-GENERAL moved that the Report of the Select Committee on the Bill "to make further provision for the recovery of arrears of land revenue and public demands recoverable as arrears of land revenue" be taken into consideration in order to the settlement of the Clauses of the Bill, and that the Clauses be considered for settlement in the form recommended by the Select Committee. He said, although the Report of the Committee had been for some days in the hands of hon'ble members, he thought it desirable to make a few observations by way of further explanation of the reasons which had operated on the Committee in making the principal alterations that they had made on the Bill as committed to them.

As the Bill stood, the effect of a sale in respect of arrears not accruing, or in respect of demands not accruing, on the estate, would have been that the purchaser at such sale would have been in the same position as the purchaser at the sale of an estate (in the ordinary sense of the word) for arrears of revenue accruing on the estate itself. It appeared to the Committee that it was not desirable nor necessary that the same effect should be given to sales in cases for which the Bill provided, inasmuch as by the law, even as it at present stood under Act XI of 1859, he apprehended that the effect of a sale for arrears even from estates where the arrear was due from the proprietor, was limited to the case of the arrear being due from the particular estate which was put up and sold, and therefore it would not be necessary, or even proper, that more extended application should be given to the effect of sales of the nature referred to in the first portion of the Committee's Report, than was given under Act XI of 1859 to the sales there contemplated. The theory of the Bill as first brought before the Council, before it went into Committee, was that

the effect of a certificate should be final as regards all questions of irregularity and omission to give notice as against proprietors, and that by way of providing against any hardships that might result from that effect given to certificates, provision should be made for personal service, in all possible cases, of notice. But in the discussions in Committee the conclusion was come to on the facts that it would be impracticable to effect the service of the notices which the Bill originally contemplated, by reason that the Collector, who was to serve the notices, was in the great majority of instances not in the possession of, and had no means of obtaining, information as to who were all the proprietors who in the particular case would be entitled to notice, and therefore it had been thought better, instead of providing for what would be practically inoperative, to extend the principle of Act XI of 1859 with regard to the posting of notices, by providing that the notices required by that Act and the present Bill should be posted, in addition to the notices mentioned in Act XI of 1859, at the sub-divisional Cutchery. It was believed that, with that rule, and with the provision of the existing law with regard to notices on the ryots not to pay rent to the defaulting proprietors, all possible security would be attained.

In Committee certain provisions were introduced with regard to the registration of under-tenures or farms. There was some reason to suppose that a little misunderstanding had prevailed with regard to these provisions. Under the existing law the holder of any tenure or farm who held immediately under the proprietor of an estate, might protect himself from the effects of a sale for arrears of revenue by special registration; but as the law stood, no holder of a tenure, other than the holder of the first tenure immediately from the proprietor, could so protect himself. Then the present Bill proposed to make these under-tenures saleable as well for arrears of Government revenue as of Government demands, and therefore a Section was introduced giving the same power to the holders of such under-tenures to protect themselves by registration, as under the present law was possessed by the holders of tenures held immediately under the actual proprietors. The effect of such registration would be that tenures so registered would stand, whether or not the estate out of which the tenure was carved had been sold, or whether any intermediate tenure was sold. When the Council came to the Section to which he was now referring, he should propose, to avoid all ambiguity, to provide in express terms that that should be the effect of the registration. It was also proposed in this registration Section, and following the principle laid down with regard to registration in Act XI of 1859, that in the application for registration the applicant should state the name or names of all the intermediate tenure-holders between himself and the proprietor of the estate, and also that of the proprietor of the estate. Under Act XI of 1859, the immediate holder of an under-tenure, who was the only person who could register, had in his application to insert the name of the proprietor of the estate. In the case under the Bill following that principle the applicant, however distant from the original proprietor, would be required to name all those who were intermediate. It was suggested to him (the Advocate-General) that there were estates in which there were

many successive under-tenures carved out of the estate, that in many cases the under-tenant might not be able to ascertain the names of all the holders between himself and the immediate recorded proprietor of the estate. That was a difficulty which could not be remedied, and certainly it was not putting the holders of such tenures in a worse but in a better position than they were, because at present they were absolutely without any remedy to protect themselves by registration against the sale of the estate; and as the making such tenures saleable for Government revenue or demands was only one portion of the general object and principle of the Bill, he (the Advocate-General) did not see that it was possible to make any distinction in the case of such tenures or to do away with the provision that the application should contain the names of all the intermediate holders.

The Bill, as it went into Committee, gave a more extended effect to the certificate of the Collector than it now did, and possibly the Council would agree that, instead of the certificate operating, as it would have done, on all the property moveable or immovable, and whosoever liable, of the defaulter, it should only operate as a lien on immovable property, and on such property as was situated within the jurisdiction in which the certificate was filed, or where execution was sought and, in either district, against the property situate in that district until execution was actually issued. It had been thought proper, with regard to the recovery of demands other than revenue, that in all cases, inasmuch as the property to be proceeded against would in most cases be immovable property, to make what was substantially a slight alteration in the existing law. He was now assuming that the Section which related to the recovery of public demands should stand. With regard to one class of cases a large one—of public demands leviable from the sureties of accountants and others, under Act XII of 1859 execution was, levied against the immovable property of the defaulter or his sureties by the officer under whom the defaulter was employed. It seemed, however, to the Committee very undesirable that such power should be given to any one except the person best qualified to deal with the matter, namely, the Collector of the District within which the property was situated, and accordingly the Committee had provided in all cases, as well as regards the recovery of demands of Government revenue, but the jurisdiction as regards the Bill should be confined to the Collector.

As already intimated in the Report of the Select Committee, they had not been able to agree as to the principle of applying the provisions of the Bill to the recovery of demands other than revenue; he said other than revenue, because he was happy to say that the contention of a distinction between Government rent and revenue had been abandoned. The Committee had been unanimous that the farmer should stand in the same position as a Zemindar. But with regard to the question of other public demands, he should wish to hear the arguments advanced by those who disapproved of the Bill in that respect, before he expressed his own views. He had before generally expressed his views on the subject, and therefore merely adverted in that brief way to the fact that there had been a difference of opinion between the members of the Committee.

The motion was agreed to.

The consideration of Section 1 was reserved. Section 2 was passed with a verbal amendment. Sections 3, 4, and 5 were agreed to.

Section 6 provided that a certificate of title should be conclusive evidence of regularity.

BAROD RAMANATH TAGORE said, he thought this Section would operate with great hardship on the ex-proprietors of the estate to be sold, because it gave an absolute title to the purchaser, notwithstanding that there might have been many irregularities in conducting the sale. He thought the certificate of title to be given under this Bill ought to be on the same footing as that laid down in Section 28 of Act XI of 1859; and he did not see any reason why the Council should depart from that provision. If this Section of the present Bill remained, an ex-proprietor would have no right to go to a Court of Law—a power which was given to him by Act XI of 1859, and it would be a great hardship to him, not only to lose his property, but to have no chance of redress. He therefore thought that the Section ought to be so amended that it should be made consistent with the provisions of Section 28 of Act XI of 1859, or, if necessary, be omitted altogether. He would therefore move, if the Council should so wish it, that the Section be omitted.

BAROD PEARY CHAND MITTRA said, he thought that, instead of being omitted altogether, the Section should be made to correspond with Section 28 of Act XI of 1859. Instead of precluding the ex-proprietor from contesting his claim in the Civil Court, the Section ought simply to provide for the grant to the purchaser of a certificate of the interest of the ex-proprietor conveyed to him.

THE ADVOCATE-GENERAL said, he would oppose the amendment. He was not in a position to know whether or not it was the intention of the hon'ble member to substitute anything for this Section. He (the Advocate-General) thought there was every possible difference between the effect of a certificate under the Act as regards tenures other than estates, and as regards sales, in the way this Bill contemplated, not for arrears of revenue accruing on the estate sold. The effect of Section 28 of Act XI of 1859, to which the hon'ble member had referred, was that the certificate was to be deemed in any Court of Justice "sufficient evidence of the title to the estate or share of an estate sold being vested in the person or persons named from the date specified." The present Bill did not propose to give to a sale under it in any way the effect that the certificate under that Act gave, as under Act VIII of 1859, the right, title, and interest of the defaulter could alone be sold. Therefore, as far as regards sales under Act XI of 1859, the certificate of title was a totally different thing. But as regards sales under Act XI of 1859, it was considered by the majority of the Committee more for the general public interest, that the effect of a sale should not in any case, or under any circumstances, be subject to be afterwards disputed in the Civil Court, on the principle that in the long run it had been found that the rise in the general value of property, and the security of title had been greater or less as greater or less effect and strictness had been given to the law with regard to sales. He made these observations as expressive of his

objection to the amendment, but he did not think it fair or satisfactory that a matter of this kind, involving a point of principle, should be brought forward without any previous notice, when the Report of the Committee had been so long in the hands of hon'ble members, who had full opportunity of studying the provisions of the Bill as amended by the Committee, and therefore, with the permission of the President, he would wish that the consideration of this Section should stand over.

The further consideration of the Section was postponed.

Section 7 was agreed to.

Section 8 provided for the registry of tenures.

THE ADVOCATE-GENERAL moved the insertion of the words "Sections 39, 40, 41, 42, 43, and 44" before the words "Act XI. of 1859."

MR. DAMPIER said, he really thought that when important amendments of this sort were brought

forward, due notice of them should be given. There was one hon'ble member at least who had not considered the question whether or not special registration was applicable to the tenures dealt with by this Bill. He should be glad if the consideration of the Bill was postponed, with the object that members who had important amendments to propose should print and circulate them.

THE ADVOCATE-GENERAL said, he had no objection. Possibly the Council would be able to make more real progress if notice was given of the amendments to be proposed; and he hoped that hon'ble members who had amendments to propose would cause them to be circulated early in the week.

The further consideration of the Bill was then postponed.

The Council adjourned to Saturday, the 13th instant.

### The License Tax.

*Statement of amount collected under Act XXI. of 1867, in the Lower Provinces.*

	PRESIDENCY.				MOFUSILL.		Total
	Before reported.	FOR THE WEEK ENDING		Reported to close of February 1868.	In March and April 1868.		
		18th April 1868.	25th April 1868.				
	Rs. As. P.	Rs.	Rs. As. P.	Rs.	Rs.	Rs. As. P.	
Collections ... ..	469,642 5 5	626	574 0 0	11,45,518	40,710	16,56,970 5	
Deduct Refunds ... ..	38,318 13 7	610	981 4 0	1,04,758	8,161	1,62,819 1	
Remaining ... ..	4,31,223 7 10	16	...	10,40,760	32,559	15,04,161 3 1	
Deductions (at the Presi- dency by the Examiner of (Claims) from salaries of servants under ... ..	Government of India Government of Bengal	27,842 5 2	...	...	...	27,842 5	
		24,868 0 2	...	...	...	24,868 0	
Ditto at Mofussil Treasuries		72,487 0 0	...	...	...	72,487 0	
Ditto at other Local Offices		12,280 0 0	...	...	...	12,280 0	
Ditto in Military Department less refunds		19,251 10 8	...	...	...	19,251 10	
Rupies 2,023-5-4		...	...	...	...	...	
(Grand Total ... ..	5,87,902 7 10	16	...	10,40,760	32,559	16,81,880 3	

## Report on the supply of Hingunghat Cotton Seed

From H. RIVETT-CARNAC, Esq., Cotton Commissioner, Central Provinces and the Berars, to the Junior Secretary to the Government of Bengal, Calcutta,—(No. 1224, dated Camp, in Berar, the 22nd May 1868.)

With reference to the correspondence quoted in the margin, I have now the honor

From Assistant Secretary to the Government of Bengal, No. 4274, dated the 27th November 1867.  
 Secretary, Board of Revenue, No. 4599, dated the 30th December 1867.  
 Junior Secretary to the Government of Bengal, No. 183, dated the 14th January 1868.  
 Ditto ditto, No. 186, dated the 14th January 1868.  
 Secretary, Board of Revenue, No. 315, dated the 20th January 1868.  
 Junior Secretary to the Government of Bengal, No. 400, dated the 1st February 1868.  
 Ditto ditto, No. 411, dated the 3rd February 1868.  
 Under-Secretary to the Government of Bengal, No. 456, dated the 7th February 1868.  
 Assistant Secretary to the Government of Bengal, No. 675, dated the 17th February 1868.  
 Ditto ditto, No. 621, dated the 20th February 1868.  
 Secretary, Board of Revenue, No. 922C, dated the 21st February 1868.  
 Assistant Secretary to the Government of Bengal, No. 671, dated the 24th February 1868.  
 Ditto ditto, No. 708, dated the 26th February 1868.  
 Ditto ditto, No. 803, dated the 10th March 1868.  
 Ditto ditto, No. 974, dated the 23rd March 1868.  
 Commissioner in Assam, No. 139, dated the 11th May 1868.

to report, for the information of His Honor the Lieutenant-Governor of Bengal, the steps taken by me to supply the Hingunghat Cotton Seed required by officers serving under His Honor for experimental

cultivation in Lower Bengal.

2. The names of the applicants for seed, whose indents were forwarded to me by the Secretary to the Government of Bengal, or the Secretary to the Board of Revenue, Lower Provinces, and the quantity required by each are shewn below:—

Number and Date of letter forwarding Indent.	Number.	Name of Applicant.	Quantity required (round of 82 lbs.)	REMARKS.
<i>Applications received through Commissioner, Dacca.</i>				
No. 4599, dated the 30th December 1867, from Secretary, Board of Revenue, Lower Provinces, and No. 186, dated the 14th January 1868, from Junior Secretary to the Government of Bengal	1	W. Foley, Esq., Burrisaul	30 lbs. each.	Forwarded direct.
	2	F. Phelin, Esq., Burrowahpore		
	3	G. Menrow, Esq., Mymensing		
	4	M. Morris, Esq., Mymensing		
<i>Applications received through Commissioner, Assam.</i>				
No. 183, dated the 14th January 1868, from Junior Secretary to the Government of Bengal	5	The Deputy Commissioner, Durrang	20 mds.	{ Forwarded through Board of Revenue, Calcutta.
	6	ditto ditto, Noongong	30 lbs.	
	7	ditto ditto, Luckimpore	30 lbs.	
<i>Application received through Commissioner, Dacca.</i>				
No. 346, dated the 20th January 1868, from Secretary, Board of Revenue, Lower Provinces.	8	C. J. Brown, Esq., Cachar	30 lbs.	Forwarded through Commissioner of Dacca.
<i>Applications received through Commissioner, Burdwan Division.</i>				
From Junior Secretary to the Government of Bengal, No. 400, dated the 1st February 1868	9	Baboo Joykissen Mookerjee, Hooghly	1½ mds.	{ Forwarded through the Magistrate and Collectors of the several Districts.
	10	" " " " " " " " " " " "	"	
	11	Raghunath Mookerjee, Howrah	1½ mds.	
	12	Rajkissen Mookerjee, Howrah	"	
	13	Shradhanand Roy, Burdwan	2 mds.	
14	Radhal Misur, Burdwan	6 mds.		
From Junior Secretary to the Government of Bengal, No. 411, dated the 3rd February 1868	16	Commissioner of Patna Division, Patna	10 mds.	Forwarded direct.
	17	Commissioner of the Bhagnpore Division	8 mds.	
FOR BHAGSULTPORE, PAROUB, NTA-DOOMKA AND GODDA.				
<i>Through the Commissioner, Burdwan.</i>				
No. 444, dated the 7th February 1868, from the Junior Secretary to the Government of Bengal	18	J. Clarke, Esq., Midnapore	30 lbs. each	{ Forwarded through the Magistrate and Collector, Midnapore.
	19	Baboo Nabis Chunder Nag, Midnapore		
<i>Through the Commissioner, Chittagong.</i>				
No. 574, dated the 17th February 1868, from Assistant Secretary to the Government of Bengal	20	Deputy Commissioner, Hill Tracts	1 md.	{ Sent through Board of Revenue.
	21	Magistrate of Noocolly	1 md.	
	22	Ditto of Tipperah	1 md.	



Number and Date of letter forwarding Indent.	Number.	Name of Applicant.	Quantity required (measured of 82 lbs.)	REMARKS.
<i>Through the Commissioner, Chota Nagpore.</i>				
No. 621, dated the 20th February 1868, from Assistant Secretary to the Government of Bengal	23	Deputy Commissioner, Singhbhum	80 lbs.	Sent direct.
	24	Assistant Commissioner, Palamow	1 ind.	
No. 622C, dated the 21st February 1868, from Secretary to the Board of Revenue	25	Commissioner, Presidency Division	13 mds.	Sent through Board of Revenue.
<i>Through the Commissioner, Rajshahya.</i>				
No. 671, dated the 24th February 1868, from Assistant Secretary to the Government of Bengal	26	Magistrate of Bogra	1 ind.	Sent direct.
	27	G. Gervan, Esq., Fulm	30 lbs.	Sent to Magistrate.
	28	A. D. C. Rehling, Esq., Hungpore	80 lbs.	Ditto Ditto.
<i>Through the Commissioner, Burdwan.</i>				
No. 708, dated the 28th February 1868, from Assistant Secretary to the Government of Bengal	29	Bahadur Naram Roy, Midnapore	30 lbs.	Sent through Magistrate of Midnapore.
	30	Bahadur Naram Roy, Ditto	30 lbs.	
	31	Okhoyram Chowdry, Ditto	...	
No. 1003, dated the 16th March, from Assistant Secretary to the Government of Bengal	32	Deputy Commissioner, Soobhanzor, Assam	6 mds.	Sent through Board of Revenue
No. 674, dated the 23rd March 1868, from Assistant Secretary to the Government of Bengal	33	Collector of Cuttack	5 mds.	Ditto Ditto.
No. 130, from Commissioner of Assam	34	Dr. Anderson, Darjeeding	80 lbs.	Sent direct.
			80 mds. and 16 seers	

3. Through an unfortunate mistake that happened when I was absent at a great distance from Hingungat some delay occurred in forwarding the seed. The whole of it was, however, despatched early in the present month, and I hope it has ere this reached its destination.

4. At the suggestion of Mr. Montresor and other gentlemen, who made certain enquiries regarding the Hingungat plant, I have drawn up a brief memorandum, copy of which I have now the honor to enclose, and I hope that it may be found to contain the information required by the gentlemen who have been good enough to undertake experiments with this cotton. To this memorandum I have at present but little to add, save that I would desire to urge, as strongly as possible, the importance of establishing seed gardens and selecting the seed, as recommended by Major Trevor Clarke, an extract from whose pamphlet on the subject is given at page 3 of the memorandum herewith forwarded. This important subject is receiving attention here, and in other parts of India where efforts are being made to improve the Cotton cultivation, and I am sanguine that if care be taken in selecting the seed, great results may be secured. As I attach much importance to the process of "roguing" the crop and selecting the seed, I may perhaps be excused for quoting here from a letter written on this subject to the Secretary to the Chief Commissioner in October 1866, in which I mentioned that "many gentlemen with whom I have consulted in Bombay have impressed on me that, without introducing new seed, which must be a work of time, much may be done at once to improve the cultivation of Cotton, by carefully selecting the seed grown in our Districts."

"Under the present system, the cultivators seldom trouble themselves, when picking the Cotton, to choose and reserve the best seed for the next season's sowings. Although in one part of a field the plants may be fine, and strong with large "bols" of Cotton, and healthy seed, whilst in another part, owing perhaps to inferiority of soil, the plants are poor and sickly and the seed proportionately bad, nevertheless the "Kupas" (seed Cotton) when picked is invariably mixed together, and no attempt is made to keep the two sorts separate. After the Cotton has passed through the gin, it is impossible, I understand, to distinguish the good seed from the bad; the size of the seed being no criterion of the superiority of its quality, as large seeds are often but the bloated produce of some small unhealthy plant. The good and bad seed being thus mixed together, much of what would be really valuable for the next sowings goes to the cattle, and a large proportion of inferior seed finds its way back to the field."

"I would therefore suggest that, during the ensuing season, the landholders be recommended to take particular care in selecting the best seed for next year's crop. For this purpose a certain number of the finest and healthiest plants, bearing the largest bols, should be

selected, and the *Kapas* (Seed Cotton) picked from those plants, should be set apart, and the seed obtained from this *Kapas* after cleaning should be reserved for the next season's sowings. A little care in selecting Cotton seed would, I am convinced, do much to improve our Cotton cultivation, and if some of the landholders could be induced (as I hope hereafter to be able to induce them to do) to raise Cotton for seed on carefully tended garden lands, a still greater improvement might be secured. Perhaps District Officers might be able to assist by planting carefully selected seed in rich fields which are sometimes attached to the public "Gardens."

5. I would be very glad if His Honor the Lieutenant-Governor should be pleased to encourage this system of the selection of seed, and if its importance could be impressed upon the gentlemen who have undertaken the experiments. I am particularly anxious that the plan recommended by Major Trevor Clarke should be followed in Bengal, because much of the seed now supplied is, I fear, not as pure and healthy as I could wish it to be, and by this I mean that it is not seed that has been grown in seed gardens, and selected on the pedigree system, for the demands for seed have been so large that they could not be supplied from the small stock of selected seed at my disposal. The seed sent is the seed of the Hingunghat District, purchased in the best villages celebrated for their Cotton, but, as I have already explained, even this seed is susceptible of improvement.

6. Intimation of the despatch of the seed has been sent to all gentlemen concerned, and I have taken the liberty to request them to keep me informed of the results of their experiments.

7. I need, perhaps, hardly mention that it will give me very great pleasure, if I can give any further assistance in the improvement of the Cotton cultivation in Bengal, and that I am at all times ready to answer any references, and, to the best of my power, to give any further information that may be required on this subject.

Memorandum from HARRY RIVETT-CARNAC Esq., Cotton Commissioner for the Central Provinces and the Berars,—(dated the 18th March 1868.)

As several gentlemen, who are desirous of making experiments in Bengal this season with Hingunghat cotton seed, have requested me to give them information on certain points regarding the locality and soil in which the cotton thrives, and the manner of its cultivation, I have drawn up the following brief note which, I hope, may be of some use to those who are inclined to assist in extending the cultivation of this superior class of indigenous cotton.

Hingunghat cotton is grown in the Wurdah district of the Central Provinces in the neighbourhood of the town of Hingunghat—an important cotton market—from which place the cotton takes its name.

The cotton is celebrated for its cleanness (freedom from leaf and dirt), brightness of colour, length, strength, evenness, and silkiness of staple. In all these points—all of which are regarded as of great importance by the spinner—the Hingunghat variety is superior to most of the Indian cottons. As compared with the cotton of Bengal, that grown in the Hingunghat country, besides being superior in all the respects noticed above, is particularly glossy and soft, whilst Bengal cotton is woolly and dull in appearance, and rough and harsh to the touch.

There can be little doubt that the superior quality of this cotton is to be attributed to the physical advantages of the tract in which it is grown. The Wurdah district is situated on the northern extremity of the great Deccan sheet of trap, which extends from Mudnour—far south in the territory of H. H. the Nizam—to the low hills which form the northern boundary of the Wurdah district. The height of the cultivated plateau is not more than 600 feet above the sea level. The soil is of the well known "*regur*" or black cotton soil composed of the debris of the trap rock, the basis of the geological formation of the district. The following description and scientific analysis of this soil is extracted from Ansted's *Geology* p. 343:—

"Its colour is bluish black, greenish or dark grey. It forms into a paste with water, and gives a clayey odour. It absorbs moisture rapidly, and parts with it in dry and hot weather. Its thickness varies from 3 to about 20 feet. It is cultivated very easily, yielding a rotation of crops, consisting of cotton and two kinds of corn. It rarely requires to be left fallow, and demands but little husbandry, although for the last 2,000 years this soil has continued in cultivation without manure, retaining the utmost fertility."

The following is an analysis of the "*Regur*":—

Silica	...	..	..	..	48.20
Alumina	...	..	..	..	29.30
Carbonate of Lime	...	..	..	..	10.00
Carbonate of Magnesia	...	..	..	..	10.20
Oxide of Iron	...	..	..	..	1.00
Water and Organic matter	...	..	..	..	4.30

100

In the Hingunghat country this soil varies in depth from 2 to 15 feet, but the average depth of the best cotton-growing lands does not exceed 6 or 8 feet. Beneath this rich coating, kukker, a sort of hard gravel is found, and below this again is the trap rock already noticed.

The country slopes gradually southward towards the river Wurdah, which forms the southern boundary of the tract, and as the village lands, following the upheavings of the volcanic crust beneath, lie in huge waves of soil, the direction of which is at right angles to the course of the river, the drainage is excellent, the rainwater being carried off by streams flowing down between the troughs of these waves, and discharging themselves into the Wurdah. The rainfall in the tract is moderate, not exceeding on an average 80 inches. Last season the monsoon was unusually heavy, and very much harm was in consequence caused to the cotton crops.

It will be seen from the above that the tract in which the cotton is grown possesses two great physical advantages—a good soil, and excellent drainage. And of the two the drainage is if anything of even greater importance than the soil. For although due provision must be made for the tap,

root of the plant, which strikes straight down into the ground, it is not necessary that the soil should be more than from 4 to 5 feet deep. Cotton is of course often sown in soil the depth of which is not one quarter of the above, but the pooriness of the soil tells upon the plant and its produce. On the other hand cotton is apt to be clogged and smothered in the very deep rich soil, and this is one of the reasons, I believe, for the plant not being very extensively cultivated in the Nerbudda valley, the lands of which are much better adapted for wheat, which is grown in, and exported in large quantities from the Nerbudda districts. In the Wardah district the deepest soil is to be found in the Mandgaon pergunnah, and here too wheat takes the place of cotton, which the people say thrives better in a lighter soil.

In selecting the fields for the experimental culture of Hingunghat cotton, I would recommend then that particular attention be paid to the drainage of the ground. At the same time a fair average soil should be allotted to the crop.

As regards the cultivation, I hardly know the seasons in which cotton is planted in the Bengal province, or the manner in which the crop is now treated. I am unable, therefore, to offer any suggestions regarding improvements to be made in the present mode of cultivation there. I will, however, mention briefly the method in force in the Hingunghat country, and as that system is sufficiently successful, it would perhaps be well if the gentlemen, who are good enough to make experiments with the Hingunghat seed, were to follow that system, unless their experience suggests that it is not adapted to the circumstances of the country. Where opportunity offers it would be well to cultivate one field according to the Hingunghat plan, and to treat another in the manner peculiar to the District in which the experiment is made.

In the Hingunghat country the cotton is sown during the first break in the weather following the setting in of the rains.\* The field selected is generally one that has borne a grain crop the previous year, for of course, cotton should never be sown two seasons running in the same ground. Previous to the commencement of the monsoon the ground is prepared for the crop by being ploughed or rather scraped by the "*bukhur*," a rough instrument which is peculiar to this part of the country, and which takes the place of the plough of Eastern India. The *bukhur* is passed over the field five or six times according to circumstances, and has the effect of scraping up and loosening the soil, and preparing it to drink in the rain, which, instead of running off the surface, as on the hard untiled ground, sinks through the loose earth moistening and softening it so as to admit of the working of the drill-plough, and the commencement of sowing operations. In this part of India cotton is never sown broadcast, but always in rows, sometimes with the drill-plough, or, when the soil is light, with the aid of the *bukhur* and a bamboo tube down which the seed is poured, and which serves the part of the feeder in the drill-plough. The seed, from the circumstance of much of the cotton fibre adhering to it, often clogs the feeder, and, to obviate this, the cultivators in this part of the country generally roll the seed in cow-dung or dry earth, which process helps it to run more freely down the tube. I mention this, as the Hingunghat seed may perhaps, without the use of this precaution, give some trouble to the sowers in Bengal. In this part of the country the seed is sown very close, too close together, and the rows are, as a rule, not far enough apart. As, however, the plant is small, and does not branch out, it admits of being more closely packed than many other varieties, but I would recommend that the rows be not less than 2½ to 3 feet apart. Soon after the plant appears above ground, the soil between the rows, which the action of the rain has hardened and caked, is loosened with a sort of hoe, a small edition of the *bukhur* which fits in between the lines. The young plant is thus helped to push its way above ground, and is now left pretty well to itself until the weeds begin to appear. The weeds should then be carefully removed, the weeding being done by hand, and this process should be repeated sufficiently often to keep the field perfectly free from grass.

As the plants progress, care should be taken to thin the field in places where the plants are found to have been sown too close together. In foreign soil the Hingunghat plant has sometimes been found to shoot up very rapidly, and to show a tendency to run to wood. In its own country it is a short, sturdy little plant, small, seldom more than 3 feet in height, but yielding a good quantity of cotton, (the great point), and when it appears to be outgrowing its strength it would be well to "top it," by cutting off a few inches from the top of the plant. And too much care cannot be bestowed in following the plan of "rogueing" the crop, as advocated by Major Trevor Clarke, and thereby ensuring the purity and high quality of the plant. In the Hingunghat country this valuable process has only recently been introduced, and although the seed sent to Bengal and other parts of India has been selected from the best lands and with considerable care, I cannot too strongly urge the importance of rogueing the crop and selecting the seed as recommended in Major Trevor Clarke's pamphlet. Spare copies of the pamphlet will be forwarded, but for facility of reference an extract from this valuable paper is here annexed.

"But I must now turn your attention to a fresh subject, already, however, alluded to in my former letters, namely, the use of pure seed, to be effected by the rigid isolation of sorts. Next to a constant supply from any indicated source, the manufacturer requires a *constant quality of staple*. From accounts I have received from credible eye-witnesses, the mixture of sorts in a cotton field, especially in the West Indies, is inconceivable, the crop in some instances looking like a flower garden with different sorts, sizes, and colours. In one case my informant described the not unfrequent appearance of a red blossomed sort, evidently the Indian *G. Arboreum* in his fields.

"This is the work of the native labourer, who is either incapable or unwilling to see the difference between right and wrong, at any rate where his own interests are not concerned. His delight seems to be in reversing, confusing, or nullifying especial orders the moment the master's eye is off, and the mixture of seed is generally his preliminary operation. In my own experience I rarely receive unmixed samples, and wrongly named sorts are continually sent home, although probably in good faith as far as concerns the sender.

"The one and only remedy for this will be found in English skill, science, and energy, strongly exerted in this one direction. Experimental farms, at the expense of, or encouraged by Government,

\* In some parts of the Chundah district, and on the Godavary a small crop is raised by sowing the cotton after the rains. It ripens in April.

are nothing new; for a century or two these have been carried on in spite of the perversity of man as well as that of the elements, and have borne their fruit. My modification, however, of the system would be this: *Let such establishments be entirely devoted to seed farming, the sole effort being restricted to the production of pure seed in the country where it is destined to be grown in future.* In this country no grower of seed, either for agricultural or gardening purposes, would now obtain a sale for his produce were he to supply his customers with mixed or inferior seeds. In the establishments of such persons the master himself goes through his crops several times a year for the purpose of destroying every plant which proves inferior or untrue to sort. This weeding process is technically and expressively called "rogueing" the crop, and is absolutely necessary to ensure purity and high quality. At the same time improvement by special selection is carried on; single plants showing high qualities are picked out for propagation, and the produce of these submitted even more rigidly to the same treatment."

If these instructions be carefully followed, and the produce of the best plants be carefully selected on the pedigree system, and seed-gardens be established and sown with the selected produce, I have little doubt that the introduction of the Hingunghat cotton seed into Bengal will do much good.

The cotton plant begins to flower in September, during the following month the pods form, and in November the capsules burst and the cotton is ready to be picked. Care should be taken to pick the cotton whilst the plant is yet young and fresh, and before the leaves wither and die and become mixed up with the cotton. Much of the cotton in this part of India is damaged, and suffers in price from the careless manner in which this process is performed.

The ginning, or the separation of the cotton from the seed, is performed here by the common native "Churka," or "Recha" as it is more properly called. Where Platt's Mearthy Gins are at hand, I would recommend that they be used.

It will be noticed that I have not recommended the use of manure. Its use should depend on the circumstances of the soil and the experience of the cultivators in that part of India where the experiment is made. What suits Hingunghat land may not be found to answer in Lower Bengal, but I may mention that here the cultivators do not generally manure their cotton-fields. They hold that if the rainfall is unusually heavy, manure may be found to answer; but that in their country, where the fall does not exceed 30 inches, manure is apt to excite the plant and drive it to wood, resulting in very fine cotton plants with hardly any cotton! Experiments are being made to test the correctness of this theory. In a new country I should be glad to see as many experiments as possible tried, and it would be well not only to sow the seed in every sort of soil available, but also to try the effect of the cultivation with and without manure.

I would, however, advise all who undertake experiments with this seed to sow not less than 5 or 6 acres at a time. Any experiment conducted on a smaller scale than this will hardly be satisfactory. On an average from 8 to 10 lbs. of cotton seed are required for an acre, and thus from 50 to 60 lbs. of the seed will suffice for each trial.

Where convenient I should be glad if not less than 12 lbs. of *Kupas* (uncleaned cotton) from each field could be forwarded to my address at Nagpore, with a statement in the accompanying form shewing the result of the experiment.

I need hardly say that I shall be at all times exceedingly glad to answer any questions, and to render any assistance in my power to all who take an interest in the subject.

\* Major Trevor Clarke's "Improvement of Cotton by Purity of Seeds," page 3, published by the Cotton Supply Association, September 1899.

*Result of Experiments with Hingunghat Cotton Seed in* \_\_\_\_\_

Size of Field and quantity of Seed sown.	Description of Soil.	Yield of <i>Kupas</i> (Cotton in the Seed) in lbs.	Yield of cleaned Cotton in lbs.	REMARKS.
				Here it would be convenient if short description of locality could be entered, with particulars of the treatment the crop received of the season, &c., &c.



There can be no doubt that when the disease appeared in a village it spread from house to house till the great majority of the residents became affected. The only safety was in flight, but it was observed that after a time the disease lost, its virulence, and the place where the fever had been ripe and fatal, became comparatively healthy; I saw a very marked instance of this during my inspection tours. Baroiparah, a suburb of Kishnaghur, was attacked with fever in a severe form early in 1864; few of the residents escaped, and when I visited the place in January 1866 I found the population which had numbered 8,000 reduced to 2,000; it was said that upwards of 1,000 had died of fever, 5,000 had left the place. Many of those who remained were weak and attenuated and showed signs of malarious poisoning. At the epidemic dispensary at this place I saw a large number of persons in a deplorable condition suffering from the sequelæ of fever.

On a subsequent visit to Baroiparah in November of the same year I found a complete change had taken place; the sickness had nearly disappeared; the inhabitants were becoming comparatively healthy, and people were returning to their old houses in the suburb.

In justice to the Civil Surgeon, Dr. Earle, and the Municipality, I should mention that much had been done in the interval between my visits to improve the sanitary condition of the locality.

A question has arisen as to what is the nature of the epidemic fever, and I presume it is on this point that the Bengal Government seek further information.

With regard to the reports herewith sent, it should be recollected that Dr. Elliot is the only Medical Officer who had seen much of the disease; he visited the infected villages, and saw the sick in their own houses, prescribed for them there, and furnished the Bengal Government in 1863 with a report on the nature of the disease: for these reasons, his opinion regarding the type of the fever, and its character as regards communicability by infection, is of more value than that of other Medical Officers who had neither seen nor studied the disease as he had done. Dr. Elliot describes the fever as follows in his published report: "The greater number of the cases are those in which the ordinary symptoms of severe remittent fever are succeeded after the stage of shivering has passed by heat and dryness of skin, headache, flushing of the face, pain on the back loins and lower extremities, with a foul tongue and secretions altered or suppressed."

These symptoms abate and return without any actual cessation, the periods of exacerbation and remission varying in different cases. If the crisis does not occur from the 5th to the 7th or 9th day, the fever continues from seventeen to twenty-eight days, or more, after which, if the patient does not recover, a low type of fever is established and he perishes with all the symptoms of typhoid fever. Quinine in the early stage of the disease was of no use, and only increased the tendency to local congestions. Dr. Elliot further states that in unventilated and crowded dwellings the exhalations and discharges from the bodies of the sick act as poisons, and in such localities the disease is communicated from one person to another and possessed contagious properties. Its rapid dissemination through a village is hardly to be accounted for in any other way.

Drs. Mantel and Thompson state that the epidemic fever was not infectious, but I think I shall be able to show that this opinion is founded on a partial and limited view of the question. It will be evident from facts which I shall mention that we have fevers prevalent in these districts of very different types and characters.

No one will assert that the ordinary epidemic remittent or intermitted fevers of Lower Bengal are infectious diseases, but intercurrent with these is a form of relapsing fever, which is decidedly infectious. In the close of the year 1856 the Patna District suffered from a severe epidemic out-break of fever chiefly affecting the rural population. The disease was described by me in my Annual Report of the Civil Station of Patna as follows:—"The type of the fever was remittent rather than continued, but the remissions during the first few days were very indistinct. The invasion of the fever was frequently rapid; without any decided premonitory symptoms the patient appeared to be struck down and become quickly reduced to a state of extreme debility; there was a marked uniformity in the symptoms; great heat of skin, much oppression, headache, eyes suffused with bile; conjunctivæ injected, pulse generally rapid but weak, tongue coated with a white fur, its tip and edges very red; but as the fever advanced, the tongue became dry and brown with sordes on the teeth; there was generally present a feeling of heat, or pain or tenderness in the epigastrium, and the bowels were either relaxed at the commencement or during the early stage of the fever; there were urgent thirst, irritability of stomach, with tenderness in the line of the colon present in some of the cases made over to me by my predecessor."

In nearly all the cases treated by me, the fever abated on the 5th or 6th day, but a relapse almost invariably took place after an interval of apyrexia of two or three days' duration, the return of the fever being nearly as severe as the original attack.

This severe epidemic differed remarkably from any of the ordinary endemic fevers I had ever seen in this country; *first*, in the suddenness of the invasion, and the severity of the head symptoms; *second*, by the rapidity with which extreme prostration and decided typhoid symptoms ensued; and *third*, by its appearing to be infectious. Several of the most robust and apparently healthy attendants on the sick were seized with fever in a far greater proportion than any other class of persons not exposed to infection; the frequency of these seizures left no doubt in my mind of the fever spreading by contagion. This epidemic out-break of fever followed an unusually heavy fall of rain in the months of October and November 1856, and it committed frightful ravages throughout the Patna District.

There can be no doubt that when the disease appeared in a village it spread from house to house till the great majority of the residents became affected. The only safety was in flight, but it was observed that after a time the disease lost, its virulence, and the place where the fever had been ripe and fatal, became comparatively healthy; I saw a very marked instance of this during my inspection tours. Baroiparah, a suburb of Kishnaghar, was attacked with fever in a severe form early in 1864; few of the residents escaped, and when I visited the place in January 1866 I found the population which had numbered 8,000 reduced to 2,000; it was said that upwards of 1,000 had died of fever, 5,000 had left the place. Many of those who remained were weak and attenuated and showed signs of malitious poisoning. At the of persons in a deplorable condition

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I recollected that Dr. Elliot is the one who visited the infected villages, and he, and furnished the Bengal Government with these reasons, his opinion regarding communicability by infection, is of neither seen nor studied the disease in his published report: "The greater symptoms of severe remittent fever are and dryness of skin, headache, extremities, with a foul tongue and

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or intermitted fevers of Lower form of relapsing fever, which Patna District suffered from a population. The disease was of Patna as follows:—"The type missions during the first few days nently rapid; without any decided own and become quickly reduced to the symptoms; great heat of skin, conjunctivæ injected, pulse generally

It appears, therefore, that a fever of a highly infectious character may originate and spread from intensified malarious influences aided probably by bad ventilation and the emanations from the bodies of the sick. That the fever described by Dr. Elliot did assume an infectious character I do not doubt, and that the excessive mortality in some localities, depended on this, is, I think, rendered highly probable; but it is only in certain favorable conditions that such a result would occur, and if the ordinary endemic fever of the place exists at the same time the fact of there being an intercurrent wave of infectious fever may be easily overlooked. In the long period that has elapsed since the first appearance of epidemic fever in Jessore in 1824 up to the present date, it is probable that fevers of very different characters prevailed; this is rendered more than probable by what will be stated hereafter. In the Patna District, in the year 1859 following an extremely heavy fall of rain in the first six days of October 1859, which flooded the whole country, there was an epidemic out-break of fever, the mortality from which was most appalling, according to a return furnished me by the Magistrate of Patna. In thirteen Thannahs, with an estimated population of 7,44,262, there were 52,653 attacked with fever and 11,870 died.

The fever was described by me in a report which was sent to the Bengal Government as a low congestive fever obscurely remittent; there was little febrile heat at any time, and the pulse was rapid and weak even during the remissions. The tongue was thickly coated with bilious fur and indented on the edges, but it never became dry and red as in the epidemic of 1856, when typhoid symptoms set in early; the bowels in this epidemic were generally loose, the motions dark and offensive; at the close of the paroxysm the patients sunk into a state of great exhaustion, and it was then necessary to administer stimulants. The fever described was very amenable to treatment; very few patients treated, by any of the European Medical Officers in the province, died, and yet the disease was most fatal among the rural population who had receive no skillful treatment. This again was a fever differing remarkably from the usual endemic fever of the place and season. It did not seem to be infectious like the relapsing fever of 1856 and 1857 above mentioned, and this was not to be expected, as the persons who died sank early in the disease in the cold stage or at the close of the paroxysm; it was a fever of a pure malarious character in which quinine had its usual antiperiodic curative effect.

The above facts show that fevers of various characters, requiring different modes of treatment, prevail in the same districts at no very distant intervals, and that although they seem to owe their origin to malaria, that there are some conditions of climate season, or states of the weather that cause them to assume different characters at different times, and the assumption that we are now treating exactly the same type of fever in the Burdwan District that Dr. Elliot treated in Nuddea in 1862-63 is by no means borne out by the facts. From the reports of the Civil Surgeons of Hooghly and Burdwan, it would appear that an ordinary type of epidemic fever is at present prevalent in these districts; neither of these Officers appear to have seen any cases similar to the fever described by Dr. Elliot, hence the apparent difference of opinion regarding the character of the disease.

It is also certain that the fever at present epidemic in the Hooghly and Burdwan Districts bears no resemblance to the fatal form of contagious fevers which has prevailed in the Jails in the North-Western Provinces since 1860.

Various causes have been assigned for the origin and spread of the Bengal epidemic fever.

It has been ascribed to bad food.

1. Bad food.

2. Bad and defective drainage, railway and other embankments having interrupted the natural drainage of the country. It is contended that this has produced an excess of moisture in the soil, a statement by no means borne out by facts.

In a late inspection visit to Kishnaghur, I reported that "it appeared from enquiries made on the spot that the district is becoming more and more arid, tanks and other reservoirs of water dry up even before the hot season; some tanks were shown me that had been full to overflowing in the rainy season they are now, (31st January) becoming rapidly dried up.

3. Foul tanks and cess pools containing putrid organic matter.

4. The presence of thick clumps of bamboos or jungle which prevent the free perspiration of air.

5. Defilement of the surface soil from human excreta, from the habits of the people, and by the burying of their dead close to their villages; heavy rain carrying impurities derived from such sources into tank containing water used for drinking and culinary purposes.

6. Unusual and unseasonable falls of rain at the commencement of the cold season, more especially if this is succeeded by a period of dry close, sultry weather as occurred before the epidemic out-break in the Behar Province in 1859.

7. The overflowing of rivers by which large tracts of country have been inundated. This took place before the epidemic out-break of fever in Patna District in 1856 and 1859.

That a combination of these unsanitary conditions would have a very unfavorable effect on the general health of people living within their influence cannot be doubted, and yet we may hesitate to conclude that no other agencies are necessary to cause an out-break of epidemic fever.

Many villages where fever has never made its appearance in an epidemic form are in an extremely bad sanitary condition as regards drainage, ventilation, conservancy &c.

It will be observed from what I have stated above that on two separate occasions heavy rain in the early part of the cold season preceded severe out-breaks of epidemic fever. These are facts of much interest and importance, as they show that the state of the atmosphere following heavy fall of rain at that season is one of the chief conditions necessary for lighting up fever of a severe and fatal character, and that on the occurrence of heavy falls of rain at that time of the year we should be prepared for an out-break of epidemic disease.

From a consideration of all the facts detailed, I think we may regard the following conclusions as at least highly probable.

1st.—That when we have epidemic fever spreading over a large tract of country and recurring every rainy and cold season for several years, that the fever is not always of the same type or character.

2nd.—That the epidemic influence, or the unhealthy epidemic constitution of the season, is not a continuous manifestation for a lengthened period the same morbid agent, it would rather seem that we have separate and independent manifestations of malarious influence using distinct types of fever.

3rd.—That although it cannot be maintained that the ordinary endemic fevers of the country are infectious, yet it is in the highest degree probable that fevers of an infectious character may be generated from conditions in which malaria seems to be the chief agent, and that fevers of an infectious and non-infectious character may prevail at the same time in the same locality.

4th.—That the unsanitary state of villages and rural districts as regards ventilation, bad water and drainage, are the chief causes which give origin to and aid in the spread of epidemic disease.

5th.—That the means for arresting the spread of such epidemics are to be found in improving the sanitary condition of the localities where the disease appears. The chief of these are: filling up pits, holes, cess-pools, &c., where decomposing organic matter has accumulated, clearing out old tanks containing impure water, converting shallow excavations into deep tanks.

If a marsh or swamp exists close to and to windward of a village, it is often practicable by digging deep tanks in convenient spots to convert the swamp into a healthy locality, using the earth procured by digging the tank for raising the general level of the adjacent swamp. This was done at Baralparah at Kishnagur with excellent effect in the instance already referred to.

6th.—There is nothing injurious *per se* in a sheet of water, provided it is not rendered impure by organic decomposing matter passing into it, and good not harm results from increasing the number of tanks in a swampy locality.

7th.—Cutting down trees should only be undertaken with the greatest care and circumspection; even clumps of bamboos may afford protection from the noxious emanations of an adjacent swamp, but in all cases care should be taken to prevent the leaves of trees and other decaying vegetation from falling into a tank.

8th.—Care should also be taken that the water of a tank used for drinking or cooking purposes is not rendered impure by receiving the drainage of a foul and polluted surface.

9th.—Efforts should be made to establish public latrines in every village. Unless this is done the atmosphere around will be tainted by the emanations from foul excreta, and my own experience leads me to the conclusion that this is one of the most potent of all agents in the production of cholera, and that it probably plays no inconsiderable part in the causation of fever also.

From H. T. THOMPSON, Esq., M. D., Civil Assistant Surgeon of Hooghly, to Dr. J. SUTHERLAND, Deputy Inspector-General of Hospitals, Presidency Circle,—(No. 34, dated Hooghly, the 17th March 1868.)

I HAVE the honor to submit the following report on the fevers which prevailed in this district during the past years. I personally visited most of the localities where it was said to be raging and invariably despatched medical aid without delay where ever assistance was urgently required in anticipation of orders, since to wait for instructions or till a Native Doctor and Compounder should be sent from Calcutta would be unsatisfactory, as they could not possibly arrive in time to be of any use in distant localities.

2. For many years past this district has suffered from a peculiar form of fever, which has been variously described by different writers. In Jessore this disease has been known according to Dr. Elliot under the name of Jar Boegar, since 1824 or 1825, when it first made its appearance at a place called Mahomedpore, some 20 miles east of the Station of Jessore; since then it has gradually spread over the Jessore District, and since 1832 over the contiguous Districts of Nuddea, reaching Chodah on the Hooghly during the rains of 1867. Two years later it invaded Baraset, from which place it gradually extended southwards into the 24-Pergunnahs, where the events of the last 3 years have tended to give it a permanent home. In 1860 it appears to have crossed the Hooghly, when it attacked Tribeni and the villages in neighbourhood, opposite the village of Halleeshuhur. In July 1862 it reached Pandooah, and in six months swept off 1,200 victims. In the cold weather of 1863 Dr. Elliot was appointed to investigate the causes which had given rise to so fatal a type of disease, and to ascertain the extent of country subject to its influence. It appears from old records that the fever is by no means a *Notungeer*; it has the same character and nature as those epidemics which used to



visit Calcutta and its neighbourhood more than a hundred years ago, with cold and hot stages, carrying off 50 or 80,000 inhabitants at a time.

The *Tar Beegar* is also mentioned in the *Shastras* from a very early period; old Indian Medical writers and others name it the *Febris Intermittens algida* in which the power of producing heat was so impaired that the patient died in the cold stage at the end of a few accessions; this fever is still found in its malignant form in the surrounding villages, and more or less severe in different years, some times after a lapse of several years, and if not in Calcutta now in so severe a type as formerly it is because it has given way to measures of municipal improvements, and it will be to sanitation alone that the advancement of the public health in this district also will be indebted.

3. From the description given by the people and from my own personal observation, I am of opinion that this fever in its ordinary form differs but little from the usual intermittent fevers, but if neglected, it runs into the remittent type, and in its worst phases, assumes a congestive form; almost all those seen by me had abdominal complications of a congestive nature which would seem to be the cause of the apparent great prostration with tendency to collapse, at which stage the utmost caution is needed in its treatment, because what might have been a saving remedy at the commencement of the paroxysm would be sure destruction at the end of it, but the numerous *Cobrages* follow only one course, starving and physicking at random, at a time when stimulance and nourishment are most needed. I have instructed my subordinates from time to time how to act in the different stages of the disease. I found this fever prevailing in some portions of the district with greater severity than in others, particularly those situated inland and far away from the line of Railway, but it has not been so virulent in its attacks in this as in former years.

4. Reports have been constantly promulgated regarding the very severe epidemics prevailing in this district, but on personally investigating the matter they have proved to be greatly exaggerated, while in some instances they were found to be trust worthy.

5. It was stated that at Bansberiah so severe an epidemic was raging that the people were flying from their homes. I at once proceeded in that direction and inspected the villages of Bansberiah, Shahagunge, Amceerpore and part of Tribeny and found them almost entirely free from sickness. The respectable inhabitants said that little or no sickness was prevailing, and indeed that it had been less in this than in former years.

6. I next proceeded to the villages of Pandooah, Ilsoha, Mondlye in the Burdwan direction, and towards Dwarbassiny, where it was also said that a very severe epidemic was raging, but on inspection I found that the fever was not of an epidemic nature, but of an intermittent type prostrating the patients for the time only, and fatal only where the patients were very old or very young and in chronic anæmic cases of former years.

7. At Dhunniakally, as well as Shahabazar, distant some 20 to 25 miles to the west of the Station of Hooghly, the fever was found to assume a much severer form, but of the same type, i. e., a smart intermittent with its well marked three stages, regular, though varying with different patients in its period of recurrence, returning sometimes after an interval of several days' duration, with nearly the same symptoms and almost as severe as the original attack, weakening the patient more and more, accompanied with its usual abdominal complications.

8. I also visited the villages of Taldangah, Tollaphatlock, Chanderagore, and Seinparah not far from the Sudder Station, where it was said that sickness was raging with great severity, but on personal inspection and enquiry it proved to be only of a mild intermittent type, as is common at this season of the year.

9. I am satisfied from the most careful and repeated enquires that the disease is not contagious and that it is a very severe form of intermittent fever, entirely attributable to local causes and malarious influences. It is endemic and not of an epidemic character; the villages that suffered most are situated in the centre or lying along the borders of vast rice swamps, for which all the districts in lower Bengal are famous, fields which at certain seasons are little better than immense shallow fetid marshes and in which the ryots work under conditions the most hostile to health.

10. The inhabitants of the villages so situated are, as a matter of course, more subject to diseases engendered by working in the marshy and slowly drying fields than those on elevated spots.

11. Sanitary measures have by no means been neglected, but on the contrary have occupied much of the Magistrate's attention. The Towns of Hooghly and Chinsurah are kept remarkably clean, but there are no pucca drains out of these towns, and the kutchra ones that have come under my observations, wherever I have been in the interior, appear to be well kept and prevented from being choked up or closed. The jungle which is almost irrepressible at certain seasons has been well kept down, the roads of the districts are in good order, and wherever new ones have been opened out, the health of that locality has greatly improved, patches of water can be seen in large excavations on the sides of the Railway embankments; but this cannot be attributed to any obstructions in the drainage of the district, and is not, in my opinion, the cause of unhealthiness. Sickness of a severe type, as I observed before, is found chiefly to exist inland, and far away from the line of Railway. There is no doubt that great improvements can be made in the drainage of different localities in the district but at an enormous cost.

12. The zemindars and ryots all seem to complain and attribute the excess of sickness and loss of life to damp during and after the rains. I have myself seen houses, the floors of which have become damp to such an extent as to enable a stick to be pushed easily through

the wall, sleeping on such a floor more or less saturated with moisture, with nothing but a thin straw mat, which, if allowed to remain on the floor for two or three days would be destroyed by damp rot. This evil might in a great measure be prevented by the people themselves erecting bamboo *machans* for sleeping purposes, as is the custom in all rice producing countries like *Burma*, *China* and other malarious localities. By this cheap and simple arrangement, the people are protected from the damp floors and influence of malaria during the night, when the system is relaxed, and more predisposed to receive it after the toil, fatigue, hunger, and anxiety of the day; but nothing under compulsion at first could effect this change. To a *Bengalee*, a foul tank, a damp floor, or a mass of rotting vegetation in the immediate vicinity of his houses carries no warning and conveys no fear; if his home be attacked by diseases generated by the malaria which has its source at his very door, his first impulse is to flee away with those who may have survived rather than to remove or assist the authorities in removing the cause of his misfortune; such unpathetic races can only be preserved from the consequences of their own ignorance and folly by constant supervision so as to teach them the danger they encounter by not observing cleanliness and the simplest rules of sanitation. In addition to the sanitary measures which have already been most energetically carried out by the *Magistrate*, I should strongly recommend that the most careful attention be paid to all drinking water by the people, being publicly advised to dip into it a red hot iron and allow the sediment to settle before using it; as those who adopt this plan have suffered less in proportion. The drinking water tanks should be placed under the entire care of the heads of villages, and the mud at the bottom should not be disturbed; all rank vegetation and underwood in their immediate vicinity should be periodically uprooted and burnt; the lower branches of trees over hanging them should be cut away in such a manner as to prevent the leaves from falling into them, the sides should be annually turfed; and the tank itself ought to be pumped out dry and the bottom redug every septennial year; but above all the surface drainage overflowing from spots covered with human ordure should be prevented from running into them; the existence of sewage and the contents of all drains and cesspools near drinking water tanks should be absolutely prohibited; the effects of impure drinking water, containing organic matter of the foulest description, must unquestionably produce serious and fatal diseases. Cholera is now well known to be caused by organic contamination of water, chiefly by human ordure, and this, too, is proved by sickness annually appearing in villages about the time the tanks receive the surface drainage from foul spots in addition to other malarious influences.

13. Aquatic plants should not be removed indiscriminately, as the water containing them is purer and more wholesome for drinking purposes than those without them.

14. The lotus or lolee (*Nymphia Lotus*) लोटस फूल the lenium or pudma (*Nymphia Alba* and *odorata*) लोले the sewlar or gauze (*Fucus Vesiculosus*) गज्ज should not be destroyed, as the oxygen given out by them purifies the water and keeps it from becoming staid; the panna-weed (*Fucus Amygdalius Cryptogamia*) गज्ज ought always to be carefully removed, as it rapidly decomposes as soon as the weather gets hot.

15. Not until a separate portion of land is allotted to each village for burial grounds and also for trenches to be daily dug in order to receive excreta and filth of the villages will it be free from fevers and other zymotic diseases produced by local causes.

In conclusion I beg to recommend that the trees of the district be strictly preserved, only the lower branches over hanging tanks should be cut away and those interrupting ventilation, as the destruction of trees is well known to make a healthy locality a notoriously unhealthy one. I should further recommend the planting of trees in double belts between marshy grounds and villages. I am of opinion that the planting of many trees or avenues round drinking water tanks should be discouraged, the leaves falling into them assist in making the water impure.

From J. ELLIOT, Esq., M. D., Officiating Civil Surgeon of Nuddea, to the Deputy Inspector-General of Hospitals, Her Majesty's Indian Army, Presidency Division, Calcutta, — (Dated Kishnaghur, the 17th March 1863.)

In compliance with your circular memorandum No. 1074, dated 15th ultimo, calling for a report on the nature of the fever lately occurring in the Nuddea and Hooghly Districts and now prevalent in some parts of Burdwan, I have the honor to state that in 1862-3, when I visited many of the villages in which it was then prevalent in its worst form, the fever, as described by me at the time, was of a peculiar character and may be said to have been of a congestive remittent type with a tendency in some cases to sudden and great depression of all the vital energies, and to excessive reaction in others, followed by rapid congestion of some vital organ, very frequently of the brain or lungs.

The congestive symptoms were concomitant with the first attack of fever, and the mortality from both the above mentioned complications was quite unusual and very great indeed.

In some instances there are said to have been discharges from the bowels resembling hæmorrhagic dysentery, but I did not see any such cases.

The chief peculiarity in the disease was its tendency to relapse or to a succession of relapses after it had apparently run its course of seven, eleven, fourteen, or twenty-one days in the first instance, and to recur afterwards at irregular periods, varying from three to thirty days when the disease had become chronic and had assumed a periodic character.

In by far the greater number of persons, after the first and most fatal outbreak had passed, the congestive determination of blood was to the liver or spleen, and after temporary recovery from the first attack, the sub acute inflammatory action which had been established in one or other of these organs seemed to me to act as a fresh exciting cause of fever and greatly assisted in reproducing it.

Either from this cause, or more probably owing to only partial elimination of the poison from the system a relapse took place from five to ten days after recovery, the febrile symptoms remaining for perhaps a week without any perceptible remission, and then, as if the poison had become weaker, in any successive relapses the fever assumed the intermittent type and recurred at intervals for months, accompanied by all the symptoms and sequelæ of what is usually termed malarious poisoning.

Intercurrent with this type of disease were many cases of the ordinary endemic fever in an intensified form, more or less amenable to treatment by quinine, &c., but certain to recur at some period within the month and as certainly followed by enlargement of liver and spleen.

The symptoms characterising the fever were detailed in a previous report.

It is usually ushered in with a rigor, followed by a strong reaction: a dry, hot or rather burning skin, full pulse, headache and intolerance of light, a foul white furred tongue, pain in the back and muscles generally.

The first signs of a remission are cleaning of the tip and sides of the tongue, which from being dry becomes moist: moisture appears on the skin also with a general feeling of relief. There is no apparent crisis; recovery is slow, the body is much emaciated, the blood deteriorated, the spleen and liver enlarged, the skin is dry, cracks and changes in color, jaundice is sometimes present.

The appetite is capricious for a long time afterwards, and after the person bathes and takes the first full meal, a relapse occurs and the disease runs its course as before.

The fever is not amenable to the usual treatment by quinine either as a preventive or as an antiperiodic. The symptoms are aggravated by its use and the tendency to local congestions increased.

The same kind of fever was known in former years in Rungpore, Dinagpore and Jessore, and from a description by Dr. Wise of a type of fever lately prevalent near Dacca, I conclude that it is of the same nature as that now under report.

It can be traced from the District of Jessore, where it prevailed in 1832 to Nuddea, Hooghley, 24-Pergunnahs and Burdwan, travelling slowly from east to west, attacking all classes of people and all kinds of villages.

It is most virulent in large and densely populated places where the land has not been cultivated or exposed to the sun's rays for years, but it has prevailed in others very differently circumstanced. In its worst type, it does not appear to remain for more than a few months in a place, but few of those attacked entirely recover so long as they remain in the locality where the disease was contracted. The mortality attending it exceeds, I believe, that of any other known disease in the same space of time.

It has been attributed by natives to obstruction of the drainage of a certain tract of country by the throwing up of the embankments for the purpose of constructing Railway, and roads. This belief was very general in 1862-63 when the fever was prevalent in villages near the Railway on either side of the Hooghley River, but it was equally prevalent in villages remote from the rail as it was in those near to it. At Majgram and Barasat, for instances on this side of the river, at Dwarbassiny, Culna, &c., on the other.

It was known in Jessore, moreover, long before the Eastern Bengal Railway was constructed.

Others have attributed it to undue moisture in the soil at certain periods of the year and to the want of good water for drinking purposes.

All places suffer nearly alike from damp during the rains, because of the want of any system of drainage; and the water is alike bad in all villages which depend upon tanks for their supply.

It would seem probable, however, that during the last 30 years some change has taken place in the general supply of water to these Districts, owing either to the silting up of the old beds of the large rivers and their branches, or to other circumstances by which their course has from time to time changed. In places where the supply of water was formerly plentiful, there is now a great scarcity, tanks and wells have almost dried up, and the little water that remains in them during the hot season deteriorates and becomes unfit for use.

It is possible therefore that as the regular supply of water has been withdrawn, the natural drainage also of that tract of country has been intercepted and changed, while the soil under such circumstances, saturated as it is in most villages with animal excreta and the decaying vegetation of successive seasons, disengages malaria in an intensified form, thereby causing a change in the type of disease generally, and under certain unfavorable circumstances such as are to be found in every village, originates fever of an exaggerated type accompanied by rapid deterioration and poisoning of the blood, with all the other symptoms of endemic fevers in their most malignant and adynamic type.

Under these circumstances, it may be supposed that in unventilated and crowded dwellings the exhalations and discharges from the bodies of the sick act as poisons, and that in such localities the disease is communicated from one person to another, and possesses contagious properties. Its rapid dissemination through a village is hardly to be accounted for in any other way.

Memorandum from K. McLEOD, Esq., M. D., Civil Assistant Surgeon of Jessore, to the Deputy Inspector-General of Hospitals, Presidency Circle,—(No. 120, dated, Jessore, the 28th December 1868.)

Referring to Circular Memorandum No.

The undersigned has the honor to state that no form of disease, corresponding to what he conceives the epidemic alluded to, has prevailed in this district since 1865. In that year a very fatal form of malarious fever was prevalent of which the writer had no personal experience, having joined the station just after its decline. The late Assistant Surgeon in charge and Sub-Assistant Surgeon both considered the disease to be simply a more malignant manifestation of the malarious fever always prevailing here after the rains.

Native Doctors have got into the way of calling all out-breaks intermittent and remittent fevers epidemic, and I suspect that intelligent Natives and Civil Officers have fallen in the same practice.

As far as the writer's experience has gone no fever has appeared in Jessore during 1866 and 1867 other than a strictly endemic manifestation of fever of malarious type.

*Report on the Epidemic Fever which was prevalent in the Burdwan District, forwarded for the information of the Deputy Inspector-General of Hospitals, by the Civil Surgeon of Burdwan.*

I HAVE the honor to report that my experience of the epidemic fever which has devastated the lower part of the Burdwan District dates from the 6th May 1867, on which day, by order of the Magistrate, I visited the village of Ghose, situated about five miles from the Mymarree Railway Station.

The inhabitants stated that the fever had been prevalent in the village since the cyclone of 1864, and they attributed it to the tank water which had been corrupted by that visitation, and to the air, which they said had continued bad from that period.

During my visit I saw about forty persons of all ages suffering from fever. Their description of its character led me to believe that it was chiefly an intermittent fever of an unusually violent type and complicated with enlargement of the spleen in nearly every case. The water of Ghose I reported at the time to be very bad indeed. The village was filled with small cesspools, and the water in these was dark in color, putrid, and abounding in insect life. Many of them were nearly dry, and through the little water which still remained bubbles of gas were constantly escaping; the mud at the bottom of these cesspools was black and offensive, and from its depth would take several days to dry up, during which period it can be easily imagined what an enormous quantity of impure gases and malarious exhalations would escape and poison the surrounding atmosphere.

A Native Doctor was sent to attend the sick at this village; during his stay, from the 3rd April to the 23rd May, 198 cases were treated, of which only one died; all the recent cases appeared to be easily cured by large doses of quinine and aperients administered early in the disease.

At the end of the rainy season of 1866 this village and also the villages of Odora, Echapore, Gungariah, Satgatchia, and Mohesh Dugah were visited by the epidemic, the result being that all who survived suffered more or less from enlargement of the spleen, anæmia and emaciation.

From the date on which the Native Doctor left Ghose up to the present time there has not been any further out-break of fever in that village, but a large number of its inhabitants are in a very bad state of health and will, in the event of an unhealthy season this year (1868), fall victims to their long standing diseased condition.

It was during the months of Bhadro, Assin, and Kartick that the epidemic fever again made its appearance in the Mymarree District. The village reported to be stricken with it were Mymarree, Echapore, and Bannootpara. Native Doctors were sent to these places, but being Mahomedans they were not popular amongst the Hindoos, and consequently the amount of relief afforded by them was not so great as it would have been had they been Hindoos.

From the 10th of September to the 4th of December, 791 persons were treated by the Native Doctors, and of these 15 died, the average number of deaths to treated being 1.89.

During my periodical visits to the different villages which have suffered, I have endeavoured to ascertain if any true cause can be assigned for this fever. I cannot, however, give any satisfactory opinion on the subject; that it solely arises from the condition of the water I cannot believe, as many villages which have not suffered at all have water just as impure as those that have suffered. The natives are almost unanimous in saying that the cyclone of 1864 has poisoned both air and water and they give this as the cause; others attribute it to certain embankments having stopped, or interfered with the drainage of the country, but this seems to be an unsatisfactory explanation.

From the character of the disease when first seen by me at the village of Ghose I concluded that it was essentially an intermittent fever; further experience, however, has shewn that remittent fever is equally prevalent in the stricken villages, and that it is these two diseases which, being of unusually severe types, have devastated the district. The fever is often of so violent a nature that some victims have died in three and four days after seizure.

I saw several lying in the hot stage, extremely weak, with enlarged spleens, some listless, others delirious; my most careful enquires have failed to discover that there was any fear of contagion amongst the inhabitants of any of the fever villages. Dr. Cayley recorded his opinion that the fever was not contagious; during his tenure of office in this station cases of it were admitted in to the Police Hospital and Jail, but in no instance was it communicated to any one else. I had a case in the Police Hospital about three months ago. The constable was brought in from the epidemic district and died in Hospital: no other patient was attacked by it.

The Sub-Assistant Surgeon of Chackdiggree and the one attached to the Moha Rajah's Dispensary in Burdwan, are both of opinion that it is not contagious, and they have each had much experience in the disease.

I am of opinion that it is nothing more than a very concentrated form of fever, resulting entirely from malarious influences and intensified by the famine from which all in those districts have more or less suffered. Severe malarious fever was very prevalent in Burdwan and its suburbs at the end of last rains: fortunately it did not become epidemic, but it was found that the quantity of quinine required to check the disease was much more than in former years.

This epidemic has gradually spread in a north-west direction. It has appeared in a village called Gangpore, about five miles from Burdwan; this is its nearest approach to the station.

The following are the villages inspected by me during the past season.

Ghose, Mymarree (four times) Echapore (twice) Bamoonpara, Ahinedpore (twice) Gangooriah (twice) Nishanpore, Betaraghur (twice) Selimahad, Gowreepore (twice) Chatkund (twice) Elamdanga, Ahboujhattee, Jowgran (twice) Dheeheepore, Poongran, Andear, Bijaree, Kejah, Gungpore, Korbugean.

I examined the water of the tanks of all these villages as well as other matters connected with the epidemic and reported the same for the information of the Government. I also appended suggestions as to the measures which should be taken to endeavour to prevent any further outbreaks of this calamitous disease.

(Sd.) A. A. MANTELL, M. D.,

Civil Surgeon.

The 8th January 1868.



**Results of the Meteorological Observations taken at the Surveyor-General's  
Office, Calcutta, from 8th to 14th June 1868.**

DATE.	Date.	Reduced Reading of Barometer at 10 A. M.	THERMOMETER.		Daily Range of the Temperature.	Mean Temperature for the day.	Mean Wet Bulb.	Computed Mean Dew-point.	Mean Degree of Humidity for the day.	Prevailing Direction of Wind during the day.	Rain.	Max. Pressure of Wind.	Daily Velocity of Wind.	GENERAL REMARKS.
			Highest Reading.	Lowest Reading.										
		Inches.	°	°	°	°	°	°			Inches.	lb.	Miles.	
June ...	8th	29.634	81.4	77.3	4.1	79.3	78.5	77.0	0.00	SSE & SSW	2.42	...	189.1	Overcast. Rain from midnight to 1 p. m. and slight rain at 5 and 6 p. m.
	9th	29.647	83.5	79.3	4.2	81.4	79.9	79.1	.94	SSW & S by W	0.22	...	63.9	Overcast. Lightning to 5. 1 A. M. Light rain after intervals.
	10th	29.668	83.4	79.4	5.0	80.1	79.0	78.9	.99	S W & S S W	1.24	31	120.3	Overcast. Brisk wind from 1 to 3 1/2 p. m. Rain nearly the whole day and night.
	11th	29.648	87.0	78.6	8.5	81.8	79.9	79.3	.91	S, SSE & S by E	1.34	41	254.6	Overcast nearly the whole day and night. Brisk wind from 10 1/2 A. M. to 7 p. m. Rain from 2 to 8 A. M. and from 3 to 5 1/2 p. m.
	12th	29.610	84.5	77.5	7.0	81.0	79.1	77.1	.86	SSW & S	0.77	55	342.4	Overcast. Highwind from 9 A. M. to 11 p. m. Light rain nearly the whole day and night.
	13th	29.61	85.0	77.0	6.0	79.5	78.4	77.0	.94	S W & W N W	5.85	0.5	437.0	Overcast. High wind from midnight to 5 A. M. and from 9 to 11 p. m. Rain nearly the whole day and night.
	14th	29.616	88.0	78.4	1.6	79.2	78.3	77.8	.90	S W	9.45	3.7	299.4	Overcast. Brisk wind from 10 1/2 A. M. to 3 1/2 p. m. and at 8 and 10 p. m. Rain nearly the whole day and night.

The mean Temperature and the mean Wet Bulb are derived from the twenty-four hourly Observations made during the day.

The Dew-point is computed with the Greenwich constants. The figures in column ten represent the humidity of the air, the complete saturation of which being taken at unity. The receiver of the lower rain gauge is 1 foot 2 inches, and that of the Anemometer 70 feet 10 inches, above the level of the ground. The velocity of wind, as indicated by Robinson's Anemometer, is registered from noon to noon.

The extreme variation of Temperature during the past seven days	...	...	10.0
The Max. Temperature during the past seven days	...	...	87.0
The Max. Temperature during the corresponding period of the past year	...	...	95.0
The mean humidity during the past seven days	...	...	0.93
The mean humidity during the corresponding period of the past year	...	...	0.78
Inches.			
The total fall of rain from 8th to 14th, ...	{ by lower rain gauge	...	15.20
	{ by Anemometer gauge	...	*
Ditto ditto from 8th to 14th, average of fourteen previous years	...	...	2.56
Ditto ditto between the 1st January and the 14th current	...	...	32.86
Ditto ditto ditto ditto average of 14 years...	...	...	15.37

\* The amount of rain could not be determined by the Anemometer on 13th and 14th owing to the paper tearing.

ERRATA.—In the last line of the Meteorological Report published in the Gazette of the 10th "for past year" read "for the past fourteen years."

24th 16th June 1868.

GOVERNMENT SERV,  
In charge of the Observatory.

## Meteorological Report up to 31st May 1888.

STATIONS.	Day.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. = 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
			Inches.	°	°				Inches.	
CALCUTTA.	22nd	10	29.831	82	81	73	S S W	...	...	Scattered cumuli.
	16		29.707	83	80	81	S	...	...	Ditto, round the horizon.
	23rd	10	29.851	85	78	83	S S E	...	...	Clear.
	18		29.719	83	82	80	S S W	...	...	Scattered cumuli.
	24th	10	29.784	89	82	73	S S W	...	...	Ditto.
	16		29.438	87	79	89	S by W	...	...	Cumulus and clouds to S S W.
	25th	10	29.772	90	83	73	S S W	...	...	Scattered cumuli.
	18		29.644	91	83	81	S by E	...	...	Ditto.
	26th	10	29.781	90	83	73	S	...	...	Clear.
	18		29.641	88	82	69	S	...	...	Scattered cumuli.
	27th	10	29.775	89	81	69	S	...	...	Ditto.
	18		29.632	88	80	47	S by E	...	...	Cumuli.
	28th	10	29.761	90	81	63	S	...	...	Scattered cirri.
	16		29.616	85	82	55	E by S	...	...	Scattered cumuli.
	29th	10	29.712	90	81	68	W S W	...	0.23	Clear to S E.
SAGOR ISLAND.	16		29.570	86	81	53	S S W	...	...	Scattered cumuli.
	30th	10	29.700	89	83	70	S S W	...	...	Scattered cumuli & low clouds from S.
	18								...	Ditto to N and E.
	31st	10	29.591	85	83	58	S	...	...	Scattered cumuli.
	18		29.736	91	82	65	S S E	...	0.40	Overcast, thunder & raining.
	16		29.687	79	77	90	S E	...		
	22nd	9-30	29.747	87	81	76	S W	Moderate	...	Scattered clouds.
	18		29.649	88	83	78	S	Light	...	Ditto.
	23rd	9-30	29.759	87	83	79	N	Light	...	Cloudy, a slight fall of rain between 23 and 4 hours yesterday.
	16		29.670	89	83	73	S	Light	...	Scattered clouds.
	24th	9-30	29.806	88	83	80	S W	Moderate	...	A few clouds.
	18		29.621	89	85	81	S	Light	...	Cloudy.
	25th	9-30	29.693	89	84	80	S W	Light	...	Scattered clouds.
	18		29.539	89	84	78	S	Light	...	Ditto.
	26th	9-30	29.706	89	83	69	S W	Light	...	Cloudy.
	16		29.609	89	84	80	S	Light	...	Scattered clouds.
	27th	9-30	29.644	89	83	76	S W	Light	...	Ditto.
	18		29.678	89	83	73	S	Light	...	Ditto.
	28th	9-30	29.673	89	83	78	S W	Light	...	Ditto.
	16		29.546	90	84	73	S W	Light	...	Ditto.
	29th	9-30	29.622	89	83	76	S W	Light	...	Ditto.
	18		29.517	91	84	73	S	Light	...	Ditto.
	30th	9-30	29.602	89	83	70	S	Moderate	...	Ditto.
	18		29.587	90	83	73	S	Moderate	...	Ditto.
	31st	9-30	29.651	90	83	71	S	Moderate	...	Ditto.
	16		29.530	90	88	73	S	Moderate	...	Ditto.
CHITTAGONG.	22nd	9-30	29.749	84	79	70	S	Light	...	Cumulus.
	18		29.679	85	81	83	W	Light	...	Cumuli in horizon from E to N W.
	23rd	9-30	29.727	84	80	68	S S W	Light	...	Cumulus.
	16		29.631	85	80	70	W by S	Light	...	Cloudy horizon towards E and N E and N.
	24th	9-30	29.690	84	81	87	S by E	Light	...	Cumulus.
	18		29.569	84	80	75	W S W	Light	...	Horizon cloudy towards E, N E and N.
	25th	9-30	29.670	85	78	71	W	Light	...	Cumulus towards E N E & N.
	16		29.561	87	82	79	W by S	Light	...	Ditto ditto.
	26th	9-30	29.670	88	82	83	W	Light	...	Cumulus.
	18		29.567	88	82	70	S W by W	Light	...	Horizon cloudy towards E and N E.
	27th	9-30	29.644	86	83	83	N W	Light	...	Cumulus.
	18		29.539	88	83	80	S	Light	...	Strong towards S E, E and N; stormy E cloudy.
	28th	9-30	29.633	85	81	63	S W	Light	...	Light thunder and rain towards W.
	16		29.523	85	81	68	S S E	Light	...	Cumuli round horizon, red stratus and cumulostratus; rain not measurable.
	29th	9-30	29.575	83	80	67	S by W	Light	...	Cirrocumulus.
ARYAH.	18		29.442	87	82	70	S W	Light	...	Ditto.
	30th	9-30	29.617	83	80	91	E S E	Light	2.35	Cirrocumulus: heavy rain falling last night.
	16		29.514	84	80	70	S W	Light	...	Horizon cloudy except towards S and S W.
	31st	9-30	29.684	83	80	87	S W	Light	...	Cumulus.
	18		29.582	84	80	82	S S W	Light	...	Heavy clouds towards E & N; E nimbus towards W & NW.
	22nd	9-30	29.644	87	80	73	S	Light	...	Fine.
	16		29.791	88	81	73	S W	Light	...	Cumuli.
	23rd	9-30	29.824	87	80	72	S W	Light	...	Fine.
	10		29.769	89	81	69	W	Light	...	Fine.
	24th	9-30	29.784	88	81	73	W	Light	...	Cirrocumuli from N E to E.
	16		29.739	89	82	73	W N W	Moderate	...	Fine.
	25th	9-30	29.771	88	82	74	S E	Light	...	Cirrocumuli.
	16		29.746	90	83	69	W	Light	...	Fine.
	26th	9-30	29.740	89	82	73	S W	Light	...	Cumulostratus.
	18		29.748	90	83	73	W N W	Moderate	...	Cumuli drifting to N E, thunder and lightning to N E.
	27th	9-30	29.790	88	81	83	S E	Light	...	Covered with cirrocumuli.
	16		29.770	88	80	79	S W	Light	...	Cumulus around horizon from N N E to W, rainbow seen to N E at 5-45 p. m.
	28th	9-30	29.786	88	78	81	S E	Moderate	0.17	Clouds and squally.
	18			88	78	81	N E	Light	...	Cloudy.

STATION.	Day.	Hour.	Barometer re- dated to 32°.	THERMOMETER.		Humidity Sat. = 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
ASTAR—(Contd.)	29th	9-30	29.717	88	80	75	W	Light	...	Scattered cumuli.
	16		29.699	89	82	73	S W	Light	...	Cirrostrati along horizon to the N. E. and N. W.
	30th	9-30	29.758	83	78	82	S E	Light	1.21	Cloudy, but every appearance of clearing up.
	31st	16	29.734	87	81	78	S W	Light	...	Cirrostrati.
	16	9-30	29.777	85	81	79	S W	Light	...	Scattered cumuli.
	16		29.742	88	81	72	S W	Light	...	Cumuli along horizon from E to N W.
	32nd	9-30	29.873	87	79	66	N W	Light	...	Cirri = W N W, horizon calm and fine.
	16		29.757	81	83	60	S by E	Light	...	Cumulostrati to N E, horizon cirrostrati to W and fine. Unsteady wind.
	33rd	9-30	29.882	83	70	65	S W	Light	...	Cirri and fine.
	16		29.733	93	80	54	S	Light	...	Cumulostrati to N N E, a few scattered cirri to W and sultry.
	34th	9-30	29.825	81	83	70	S S W	Light	...	Scattered cirri and fine.
	16		29.707	81	79	56	E	Moderate	...	Distant thunder in W at 14-15; thunder and few drops of rain at 15-20; cumulostrati, cirrocumuli, and nimbi overcast since 14 hours. Unsteady wind.
CAPTAIN.	35th	9-30	29.828	81	83	70	S by W	Light	...	Cumulostrati, cirrostrati and cirrocumuli.
	16		29.707	80	78	56	S W	Light	...	Distant thunder in S W at 14-45, overcast since 14 h.; nimbi and strati.
	36th	9-30	29.827	80	82	69	S W	Light	...	Thin cirri to N and S S E and hazy.
	16		29.709	84	82	68	S by E	Light	...	Cumulostrati and cirrostrati to N W by N horizon & sultry.
	37th	9-30	29.806	81	83	70	S by W	Light	...	Scattered cirrostrati. Calm and hazy.
	16		29.742	87	78	58	N W	Light	...	Nimbi and overcast. Severe thunder, lightning and threatening to S W at 16-40; slight rain with severe lightning and thunder at 17-10 and 17-40.
	38th	9-30	29.803	84	80	75	E by N	Light	0.05	Cirrostrati, cirri, calm & hazy.
	16		29.661	83	81	67	S by E	Light	...	Cumulostrati, cirrocumuli, cirrostrati, calm and sultry. Distant thunder in N at 16-45 and 17-15.
	39th	9-30	29.745	81	81	63	S by E	Light	...	Cirrostrati, calm and hazy.
	16		29.670	88	76	45	E	Light	...	Distant thunder in S W at 13-45 and 14-45; cumulostrati, nimbi strati, thunder and lightning. Slight rain at 14-15.
	40th	9-30	29.745	81	81	63	S by E	Moderate	...	Cirrocumuli, cirrostrati & cirri.
	16		29.628	84	81	55	S by E	Light	...	Cumulostrati, strati and cirri.
MADEIRA.	31st	9-30	29.774	83	83	63	S by W	Light	...	Cirri overcast, cumulostrati and cirrostrati.
	16		29.620	84	82	59	S	Light	...	Cirrostrati, cirri and misty horizon. Unsteady wind. Distant thunder in N W, and slight lightning at 21-26 N W, with heavy rain, severe thunder and lightning at 21-47, lasted nearly 2 hours.
	32nd	10	29.878	81	79	65	W by S	...	...	Cloudy.
	16		29.736	87	78	65	S E	...	14°	Dicto.
	33rd	10	29.853	80	82	69	S	...	6°	Fine with haze.
	16		29.714	84	79	63	S E	...	12°	Clear.
	34th	10	29.794	82	81	60	S	...	9°	Fine with passing clouds.
	16		29.663	89	81	69	S E by E	...	13°	Fine.
	35th	10	29.771	84	79	49	S W	...	6°	Cloudy.
	16		29.670	83	79	64	S E	...	11°	Passing clouds.
	36th	10	29.798	81	81	63	S E	...	9°	Cloudy.
	16		29.680	81	79	56	S E by E	...	13°	Light cloudy.
DARWIN.	37th	10	29.778	83	80	44	S E by S	...	10°	Light cloudy.
	16		29.660	89	80	65	S E	...	14°	Light clouds.
	38th	10	29.722	87	88	68	N W by W	...	6°	Fine with light clouds.
	16		29.637	80	81	66	S E	...	14°	Light clouds.
	39th	10	29.721	85	78	44	S	...	11°	Fine with light clouds.
	16		29.698	90	81	66	S E	...	15°	Fine.
	40th	10	29.765	84	79	44	N W by W	...	8°	Dicto.
	16		29.392	88	82	69	S E	...	18°	Fine with light clouds.
	31st	10	29.701	81	80	60	S S E	...	15°	Fine.
	22nd	9-30	29.208	60	67	87	N W	Light	0.07	Rather misty.
	16		23.243	65	61	78	N W	Light	...	Mist rising all round.
	23rd	9-30	23.247	69	68	98	S S W	Light	0.1	Heavy mist.
DARWIN.	16		23.209	64	61	83	N W	Light	0.00	Cumuli round horizon and a few thin clouds.
	34th	9-30	23.247	61	59	88	S E	Light	...	Misty.
	16		23.183	69	64	74	W by S	Light	...	Cirrocumuli.
	35th	9-30	23.386	63	60	83	N	Light	...	Pretty clear and sunny all the morning, but for last 2 hours a mist has been rising. Cumuli and slight nimbi.

• Velocity in miles per hour.

STATIONS	Day.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. 100.	Wind.		Rain.	WEATHER
				Dry.	Wet.		Direction.	Velocity.		
			Inches.	°	°				Inches.	
DARJEELING. (Contd.)	30th	9-30	23.187	63	69	63	SE	Light	...	Cumuli round horizon and a few thin clouds. Delightful morning.
		16	23.234	69	60	60	W	Light	...	Cumuli, nimbi round horizon, rest clear. A few drops of rain at noon.
	27th	9-30	23.252	67	63	79	ESE	Light	...	Cumuli round horizon, mist rising from valleys to NE and SE, agreeable morning.
		16	23.231	70	64	70	W	Light	...	Cumuli round horizon, rest clear.
	28th	9-30	23.295	72	64	62	SE	Light	...	Clear, delightful morning.
		16	23.221	73	65	62	W	Light	...	Cumuli round horizon, rest clear.
	29th	9-30	23.253	70	63	65	E	Light	...	Clear delightful morning.
		16	23.183	67	62	74	W	Moderate	...	Scattered cumuli. Rather heavy to SW and W.
	30th	9-30	23.218	65	63	60	W	Light	...	Rather misty. The morning dawned with a dense mist.
		16	23.140	63	62	64	W	Light	...	Dense mist.
Dacca.	31st	9-30	23.247	68	63	72	W	Light	...	Rather misty.
		16	23.202	67	61	64	W	Light	...	Cumuli and slight nimbi. A dense mist nearly all day, when a few drops of rain fell unmeasurable.
	22nd	9-30	29.775	84	81	61	SSW	Calm	...	Very cloudy.
		16	29.663	84	81	67	ESE	Moderate	...	Partially cloudy.
	23rd	9-30	29.746	83	80	67	SE	Light	...	Clear.
		16	29.637	86	81	70	W	Calm	...	Sultry, partially cloudy.
	24th	9-30	29.707	80	83	87	SE	Light	...	Partially cloudy.
		16	29.575	87	83	84	SE	Light	...	Very cloudy towards the SW.
	25th	9-30	29.712	84	80	83	ENE	Light	0.7	Partially cloudy.
		16	29.543	87	83	79	NK	Light	...	Ditto.
FARRUKH.	26th	9-30	29.774	86	82	63	ESE	Light	...	Cloudy.
		16	29.707	84	83	70	E	Light	...	Ditto.
	27th	9-30	29.700	88	83	60	E	Light	...	Partially cloudy.
		16	29.652	90	83	60	ESE	Light	...	Ditto.
	28th	9-30	29.651	89	81	76	N	Fresh	...	Cloudy.
		16	29.520	91	84	73	NNW	Light	...	Ditto.
	29th	9-30	29.557	88	85	67	ESE	Light	...	Ditto.
		16	29.437	92	82	63	SW	Light	...	Thunder towards N.
	30th	9-30	29.632	88	81	79	SSW	Light	0.8	Partially cloudy.
		16	29.527	84	83	80	N	Light	...	Very cloudy.
ROBERTS.	31st	9-30	29.753	77	74	86	NNE	...	...	Heavy gale, passing shower of rain.
		16	29.586	81	79	91	ENE	Light	...	Rain at 12-40 not measurable.
	22nd	10	29.543	89	82	48	N	Light	...	Strati.
		16	29.519	88	74	49	NE	Moderate	...	Ditto, dust storm from N at 14 hours.
	23rd	10	29.506	97	78	40	NE	...	...	Cirrocumuli.
		16	29.471	98	76	31	NE	Moderate	...	Strati.
	24th	10	29.517	95	72	28	NW	...	...	Ditto.
		16	29.427	102	74	26	W	Moderate	...	Cumuli, cumulostrati.
	25th	10	29.196	103	72	21	NW	Light	...	Ditto, cirrocumuli.
		16	29.105	101	71	23	NW	Light	...	Cumuli.
ROBERTS.	26th	10	29.389	101	76	27	SE	Light	...	Ditto, cumulostrati, thunder storm passing by S at 7.
		16	29.370	106	74	21	NW	Light	...	Cirri.
	27th	10	29.473	98	77	33	NE	...	...	Strati.
		16	29.350	104	76	27	NW	Light	...	Cirri.
	28th	10	29.564	99	78	38	NE	Light	...	Cirri.
		16	29.512	101	76	36	NE	Moderate	...	Ditto.
	29th	10	29.411	102	78	31	NE	Light	...	Cumuli.
		16	29.295	107	77	25	N	Moderate	...	Cumuli.
	30th	10	29.241	106	81	31	W	Moderate	...	Cirri, cumuli.
		16	29.269	103	76	21	NW	Moderate	...	Cumuli, cumulostrati, cirrocumuli.
ROBERTS.	31st	10	29.301	105	81	32	NW	...	...	Ditto, nimbi raining, thunder storm at 4.
		16	29.300	89	77	82	NW	Light	...	...
	22nd	9-30	29.874	81	72	62	SE	...	0.30	Cloudy sky at 1 hour; heavy storm from W at 3 with heavy rain storm over at 4-16; sky clear at 5, & SE wind resumed.
		16	28.803	90	74	44	Calm	...	...	Bright calm morning with cumuli in N sky.
	23rd	9-30	28.900	90	75	47	Calm	...	...	Few patches of cumuli in N and NE; sky increased in same quarter as the day advanced; calm all day.
		16	28.836	95	72	28	NW	...	...	Few patches of cumuli in morning increased greatly by 10 a.m.; dust storm with thunder & lightning from N W at 10 hours, which changed to NE at 11-30, & rain fell at 22 hours.
	24th	9-30	28.819	93	72	34	Calm	...	...	Clear, bright day, few cumuli in northern sky at 14 hours.
		16	28.740	89	73	26	Calm	...	...	Few patches of strati in N sky at 10 hours.
	25th	9-30	28.818	85	72	29	Calm	...	...	...
		16	28.741	101	73	24	Calm	...	...	...
ROBERTS.	26th	9-30	28.652	89	72	24	Calm	...	...	...
		16	28.700	100	73	43	SE	...	0.20	...
	27th	9-30	28.661	95	73	31	SE	...	...	...
ROBERTS.		16	28.768	102	76	28	SW	...	...	...

STATION.	Date.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. = 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
			Inches.	°	°				Inches.	
HONOLULU.	28th	9-30	28.644	90	78	29	S E	...	...	Low cirri to N sky, hot calm day; the feelings indicate a marked increase of heat as compared with previous 2 or 3 days.
	10	10	28.723	103	79	23	Calm	...	...	Sharp E wind up to noon, after which sultry and calm till 5-30, when a brisk S E wind rose up clouds with thunder & lightning till 22 hours.
	29th	9-30	28.784	99	77	33	E	...	...	Brisk S E wind in the morning; calm interval from 11 till 10, after which S E wind again with clouds.
	10	10	28.661	107	79	29	Calm	...	...	A few patches of cirri in S W sky; sharp S E wind at 10, calm at 10.
	30th	9-30	28.728	100	78	34	S E	...	...	
	10	10	28.636	99	78	36	S E	...	...	
	31st	9-30	28.740	100	78	34	S E	...	...	
	10	10	28.667	107	79	29	Calm	...	...	
	22nd	10	28.693	83	78	62	...	...	...	Solar halo 7 to 9 A. M., cumulus thunder storm with rain 5 to 7 P. M.
	23rd	10	28.642	93	78	51	...	...	0.30	Cirrus, cumulus.
MAUI.	24th	10	28.681	84	78	67	...	...	...	Cirrus, lightning to N after sunset.
	10	10	28.610	93	77	45	...	...	...	Cirrus.
	25th	10	28.614	83	75	40	...	...	...	Cumulus, cirrostratus, thunder in south at 2 P. M.
	10	10	28.460	94	74	38	...	...	...	Cirrus, stratus, nimbus at 3 P. M.
	26th	10	28.670	96	79	44	...	...	...	Cumulus.
	10	10	28.451	97	74	35	...	...	...	Cirrus, cumulus.
	27th	10	28.584	95	80	49	...	...	...	Cumulus, cirrostratus, lightning to W after sunset.
	10	10	28.419	97	79	42	...	...	...	Cirrus, cumulus, dust storm at 5 P. M.
	28th	10	28.610	94	79	49	...	...	...	
	10	10	28.450	95	76	45	...	...	...	
KAUAI.	29th	10	28.679	97	79	42	...	...	...	
	10	10	28.110	101	78	32	...	...	...	
	30th	10	28.578	100	79	30	...	...	...	
	10	10	28.377	103	78	29	...	...	...	
	31st	10	28.435	99	79	38	...	...	...	
	10	10	28.381	104	78	29	...	...	...	
	10	10	28.491	96	85	62	...	...	...	
	10	10	28.423	85	74	57	...	10	...	
	22nd	9-30	28.551	80	78	43	N W	...	11	A great blast from N W with heavy E at 3 P. M.
	23rd	9-30	28.483	79	69	68	W N W	...	...	Clear and calm.
LAWAIE.	24th	9-30	28.619	85	78	64	S E	...	...	Ditto very warm.
	10	10	28.503	93	79	35	N W	...	...	Ditto ditto.
	25th	9-30	28.532	94	76	38	W N W	...	...	Ditto very sultry.
	10	10	28.454	97	77	37	N E	...	...	Ditto ditto.
	26th	9-30	28.541	95	78	34	N E	...	...	Ditto ditto.
	10	10	28.436	99	77	33	N E	...	...	Ditto ditto.
	27th	9-30	28.540	93	79	61	N E	...	...	Ditto ditto.
	10	10	28.434	100	81	41	E	...	...	Ditto ditto.
	28th	9-30	28.529	93	77	45	N E	...	...	Ditto ditto.
	10	10	28.343	99	81	43	N E	...	...	Ditto ditto.
KAPAHULU.	29th	9-30	28.520	93	77	43	E	...	...	
	10	10	28.377	91	78	63	N E	...	...	
	30th	9-30	Not received.							
	10	10	Not received.							
	31st	9-30	Not received.							
	10	10	Not received.							
	22nd	9-30	27.701	83	71	62	W	...	...	Cool, cloudy, thunder, lightning on N & E, threatening rain all round us.
	23rd	9-30	27.731	78	70	65	W	...	...	Cool, pleasant cumulus overhead.
	24th	9-30	27.841	89	72	69	S W	...	0.03	Hot, close morning; thunder lightning on S in evening, heavy cumulus.
	25th	9-30	27.746	92	73	37	N W	...	...	Ditto heavy cumulus all round horizon.
KAPAHULU.	26th	9-30	27.709	86	73	48	N W	...	...	Hot, cloudy. Ditto.
	10	10	27.704	83	71	20	N W	...	...	Cool, pleasant; thunder & lightning all round us; rain in evening from S E.
	27th	9-30	27.778	88	71	44	S	...	...	Warm, gently cumulus overhead all day.
	10	10	27.681	86	73	28	W	...	...	Warm, heavy cumulus to S and E; long cirri overhead in evening.
	28th	9-30	27.751	89	73	41	S	...	...	
	10	10	27.690	97	72	25	N	...	...	
	29th	9-30	27.700	88	74	34	S W	...	...	
	10	10	27.671	85	70	44	E	...	...	
	30th	9-30	27.749	84	75	61	E	...	0.38	Cool, hot day; cloudy evening, threatening rain.
	31st	9-30	27.564	92	76	65	E	...	0.10	Thunder storm to S at dawn all round as in afternoon.
	10	10	27.714	87	75	65	S	...	...	
KAPAHULU.	22nd	9-30	27.629	80	75	34	S	...	...	
	10	10	27.680	89	77	58	S	...	...	
	23rd	9-30	27.684	85	78	38	S	...	...	
	10	10	27.691	84	77	71	S E	...	...	

\* Velocity of wind in miles per hour.



STATION.	Day.	Hour.	Barometer reduced to 32°.	THERMOMETER.		Humidity Sat. = 100.	WIND.		Rain.	WEATHER.
				Dry.	Wet.		Direction.	Velocity.		
PALE POINT.			Inches.	☉	☉				Inches.	
	17th	9-30	29.871	88	84	83	S S W	...	...	Moderate breeze and fine.
		16	29.731	88	84	83	S S W	...	...	Strong breeze.
	18th	9-30	29.821	84	80	83	N W	...	0.2	Moderate breeze.
		16	29.706	86	83	83	S W	...	...	Ditto ditto.
	19th	9-30	29.756	86	83	83	S W	...	...	Ditto ditto.
		16	29.664	87	83	83	S S W	...	...	Ditto weather.
	20th	9-30	29.891	84	80	83	E S E	...	...	Ditto breeze.
		16	29.899	85	80	79	S S W	...	...	Ditto weather.
	21st	9-30	29.740	81	77	82	N	...	0.2	Light winds and clear. A very steady squall with rain at 5 P. M. yesterday.
		16	29.846	85	81	83	E S E	...	...	Light weather.
	22nd	9-30	29.726	85	81	79	W	...	0.1	Moderate breeze.
		16	29.634	87	82	79	S W	...	...	Ditto weather.
	23rd	9-30	29.745	86	81	79	S	...	...	Moderate breeze. A squall with heavy thunder and lightning at 4 hours.
		16	29.839	86	83	76	S S E	...	...	Moderate breeze.
	24th	9-30	29.701	88	83	80	S S W	...	0.7	Ditto ditto.
		16	29.603	88	84	83	S S W	...	...	Ditto ditto with thunder N.W.
	25th	9-30	29.708	88	83	80	S W	...	...	Ditto ditto and fine.
		16	29.582	88	83	80	S W	...	...	Ditto weather. A N W squall with thunder and lightning and small rain not markable.
	26th	9-30	29.701	88	83	80	S W	...	...	Light weather and fine.
		16	29.619	88	83	80	S W	...	...	Moderate breeze.
	27th	9-30	29.694	87	83	80	S W	...	...	Ditto ditto.
		16	29.573	88	83	80	S W	...	...	Ditto weather and fine.
	28th	9-30	29.691	88	83	80	Variable	...	...	Light air and fine.
		16	29.509	89	84	80	S	...	...	Light weather with thunder in the N W.
	29th	9-30	29.642	88	83	80	S W	...	...	Moderate breeze.
		16	29.532	88	83	80	S W	...	...	Strong breeze. Heavy thunder and lightning with threatening appearance N W at 14 hours.
	30th	9-30	29.642	88	83	80	S W	...	...	Moderate breeze.
		16	29.531	89	88	78	S W	...	...	Strong ditto.

BENGAL SECRETARIAT,  
The 11th June 1868.

HENRY F. BLANFORD,  
Meteorological Reporter to Govt. of Bengal.

ERRATUM.—In Calcutta Gazette No. 22 of 27th May, page 356, Hazareebaugh, 2nd May 9-30, in humidity column for 91 read 31.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JUNE 24, 1868.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.*

### Proceedings of the Council of the Lieutenant-Governor of Bengal for the purpose of making Laws and Regulations.

*Saturday, 18th June 1868.*

#### PRESENT:

HIS HONOR THE LIEUTENANT-GOVERNOR OF BENGAL, *Presiding.*

T. H. COWIE, Esq., *Advocate-General,*

H. L. DAMPIER, Esq.,

A. R. THOMPSON, Esq.,

S. S. HOGG, Esq.

KOMAR HARENDRA KRISHNA, RAI BAHADOOR,

BABOO RAMANATH TAGORE,

H. KNOWLES, Esq.,

BABOO PEARY CHAND MITTRA,

T. ALCOCK, Esq.,

H. H. SUTHERLAND, Esq.,

AND

KOMAR SATYANUND GHOSAL.

#### POLICE AND CONSERVANCY OF HASTINGS.

MR. HOGG said, as a memorial from the householders and residents at Hastings had just been received, drawing attention to the several provisions of the Bill "for subjecting the Southern portion of Hastings to the provisions of the Municipal Acts of Calcutta," he would ask that the consideration of the Bill be postponed to the next meeting, to enable the Council to consider the memorial received.

BABOO PEARY CHAND MITTRA said, he had not the least objection to the postponement of the consideration of the Bill, but he thought it would be well if the hon'ble mover were to lay before the Council an estimate of the probable amount of the income and expenditure of Hastings; and should there be any deficit, if he would show how it was proposed that the deficit should be met. This information was absolutely necessary before the Bill could be properly considered. It would be well if it was understood that all necessary information would be submitted to the Council before they were asked to pass the Bill.

MR. HOGG said, he would at the next meeting be prepared to answer any questions, and to give

any information the hon'ble member might require.

The consideration of the Bill was postponed.

#### RECOVERY OF ARREARS OF REVENUE AND PUBLIC DEMANDS.

THE ADVOCATE-GENERAL said, the Council were aware that for some days several amendments which he had proposed had been in circulation, and also two important amendments proposed by the hon'ble member opposite (Baboo Ramanath Tagore). Since then, he (the Advocate-General) had come to the conclusion that before the Bill could be finally reduced into what might be considered a desirable form, some other modifications, and not unimportant modifications, would be necessary; and he might also mention that since the last meeting a communication had been brought to his notice from the Commissioner of Cuttack (in which district the practical operation of the proposed measure would be more tested than in any other part of Bengal) which contained many points requiring consideration. No doubt the Council might now proceed, to a certain extent, to the further consideration of the Clauses of the Bill; but he thought that, on the whole, perhaps the better course would be that whatever further modifications the Bill might require should

be submitted all together as early as possible in the course of the next week, so that the Council should be in a position to consider the Bill as a whole, and determine as to what its final shape ought to be. He would therefore propose that the further consideration of the Bill should be postponed to the next meeting of the Council.

The further consideration of the Bill was postponed.

#### SUITS BETWEEN LANDLORDS AND TENANTS.

MR. THOMPSON moved for leave to bring in a Bill to amend the procedure in suits between landlords and tenants. He said, the object of the proposed measure was in the first place to transfer the adjudication of suits between landlords and tenants now triable by the Revenue Courts to the Courts of Civil Jurisdiction; and, secondly, to amend the procedure under which that class of suits was now tried. The Council was aware that the laws and regulations which governed the procedure and trial of what were formerly called summary suits for arrears of rent between landlord and tenant had undergone many changes. Previously to the passing of Act X. of 1859, the rules and practice in the conduct and institution of summary suits between landlords and tenants for the recovery of rent, and complaints of illegal distraint for rent, were scattered over the pages of many old Regulations, dating from the year 1793 to 1839, and the necessity for the revision and consolidation of the Distraint and Summary Suit Laws having been generally recognized, Act X. of 1859 was passed, after much deliberation and debate, with the object of providing one uniform procedure for all such suits. It would not, perhaps, be considered necessary for him to impose upon the Council an explanation in detail of all the stages through which the rent laws in the country had passed, the Courts before which they were cognizable, and the procedure under which they were tried. As he had before remarked, these changes had been frequent and numerous. It would be sufficient to say that originally the cognizance of this class of suits was vested in the Civil Courts. By a later Regulation (VII. of 1799), the Judges were empowered to refer to the Collector for preparation and report cases of that kind which came before them; and from that time all such suits were heard in the first instance by Collectors of land revenue. This system was, however, found not to be sufficiently expeditious for the adjudication of such cases, and by a later law Regulation XIV. of 1824, Collectors were authorized not only to report, but to hear, investigate, and determine such suits, but only when referred to them by the Civil Courts. The delay which arose through such references was, however, found to be objectionable, and by Regulation VIII. of 1831, the authority of the Civil Courts to entertain these suits was finally rescinded, and the Collectors were empowered to take up these cases and try them, and that power was recognized in Act X. of 1859.

It would be scarcely necessary to remind the Council that the question of jurisdiction as to the cognizance of suits of this nature was one which was seriously and long discussed in the deliberations of the Legislature at the time when the existing rent law was under the consideration; and though there were many influential voices

against the exclusive jurisdiction of the Revenue Courts, the opinion prevailed, and was finally adopted, that all cases which could arise between landlord and tenant were best left to the primary cognizance of the Revenue authorities. For the last eight years that law had been in force.

Now, it would be necessary to bear in mind that the class of suits triable by Collectors before Act X. of 1859 was passed, were entirely of a summary nature; they were either for the realization of arrears of rent on the part of the zemindar, or complaints on account of illegal exactions on the part of the ryot—cases which went under the familiar names of *hustum* and *punjam*. But by Act X. of 1859, a great many suits that were formerly triable by the regular Courts were transferred to the cognizance of Revenue Officers; and it was not only that cases for the recovery of arrears of rent or complaints of improper exactions remained for adjudication by those officers; but cases involving very intricate questions of law, and important interests in landed property were, under Act X. of 1859, brought before the Collectors and their subordinates.

He (Mr. Thompson) would not go the length of saying that the experiment had been a total failure, and that the Revenue Courts had proved themselves wholly incompetent to adjudicate in all such cases; but this he could assert that the opinion now of all competent to give an opinion upon the subject, was that the work would be better done if transferred to the regular Civil Courts of the country. This was founded on the knowledge that the Civil Courts generally were now presided over by officers who had had special preparation for their duties; and that from their official habits and experience such officers would be better fitted to deal with the class of suits which the rent-law had given rise to, than executive officers who had had no such training, and who had to give their attention to many other duties.

Objection had been made to him that as the present system had been so long in force, it would be better not to change it now, as the Deputy Collectors had become familiar with the procedure in the trial of rents suits. He begged to oppose to that, that as in all branches of the rent-laws there was now a large body of judicial precedents laid down in the decisions of the High Court with which the Civil Courts were familiar, there would be no disadvantage in that respect by transferring the cognizance of such suits to those Courts.

He (Mr. Thompson) would advert to another important consideration as pointing to the advisability of the proposed transfer of jurisdiction. It had been advanced by those who desired that the primary cognizance of rent suits should remain in the hands of the Collectors, that, considering that large number of sub-divisions had been created throughout the country, and that generally Deputy Collectors had been placed in charge of them, the means of redress would be abundant, and facilities afforded to the poorer classes (for whose benefit, Act X. of 1859 was principally intended) in the conduct of these cases. He did not know how far that expectation had been realized, but certainly in the remote districts of Bengal, there were many more Moonsiffes than Collectorates or sub-divisions, and all recent enquiries clearly showed (as would

be seen from the annexures to the Bill) that whereas sub-divisional officers were overburdened with work, the files of the Moonsiffs' Courts were comparatively light. The Courts of the Moonsiffs in all parts of the country had a local jurisdiction of limited extent, and therefore no objection could rightly be raised that facilities for redress would not be afforded if the proposed transfer was effected. He thought rather that there would be as great, if not greater, facilities under the proposed change; and if we took into account the training and experience of the Moonsiffs, supervised as they now were by the High Court, he fully anticipated, not only that the expedition in the disposal of suits would be greater, but that more satisfaction would be given to the parties by the better and more uniform administration of the law.

With this view, he had, with the assistance of the learned Assistant Secretary, brought in a Bill to transfer the adjudication of suits between landlords and tenants from the revenue to the Civil Courts; and he proposed in the institution and trial of such suits the adoption generally, with a few necessary modifications, of the procedure of Act VIII. of 1859. It was with some hesitation he had taken that course, because he had found it remarked by many who were conversant with the rent law, that the procedure under Act X. of 1859 was admirably suited for cases of a summary character; and unless very good grounds were shown, it was not advisable to change it. Still, the advice of those with whom he had consulted favoured the view that it would be better, on the whole, to adopt the procedure of Act VIII. of 1859, and the Acts amending it, with such modifications as might be necessary for the speedy determination of rent cases. And while it was certain that under that Code even regular civil suits were disposed of now with a despatch which gave no cause for complaint, the advantage would be very great in having one code of procedure for all cases in the Civil Courts.

The Bill was only to have effect in those parts where the permanent settlement prevailed, and so far Act X. of 1859 would not be repealed, but would remain in force in the places to which the new law did not extend. But there would be a Clause empowering the Government to extend the provisions of the Act to any other places which it might think fit.

With those remarks, he begged to move for leave to bring in the Bill.

The motion was agreed to.

#### POLICE AND CONSERVANCY OF TOWNS.

MR. DAMPIER said, the next motion was in his name; but before making the motion formally, he would ask leave to refer once more to the doubts which had existed, and he was afraid existed still, as to the possibility of working the Bill, and as to the objects of it being appreciated by the people in towns. Here was an extract from a general report on the affairs of his District from a Magistrate on whom he was sure great reliance could be placed. The report was not written in reference to this Bill, but the passage he would read occurred incidentally in one paragraph of the report. The Magistrate said:—

"In my tour I did my utmost to foster in the people a desire for Municipal Institutions. In most of the chowkey-darree unions the respectable inhabitants have generally held

aloof, and the Panchayat has consisted of men of no local standing or position. At Chogdah and Jagooly we had great difficulty in getting any one to serve at all: but by treating the members of the Panchayat like Municipal Commissioners and by consulting them as to the disposal of the funds, the strength of the Police, and other questions I have found no difficulty in inducing the leading people to the management of their own towns. With a little tact and care, I am sure that Municipal Institutions can be very greatly and advantageously developed."

He (Mr. Dampier) thought that was a strong confirmation of the views he had expressed as to the Bill before the Council. He would now move that the Report of Select Committee on the Bill "to amend and consolidate the law for the regulation of Police in Towns under the control of the Lieutenant-Governor of Bengal, and for the conservancy and improvement thereof," be further considered in order to the settlement of the Clauses of the Bill.

On the motion of MR. DAMPIER, a verbal amendment was made at the beginning of Section III, and the following words were substituted for the first proviso in the Section:—

"Provided always that any assessment, rate or tax which may be in force under the said Acts, or any of them, in any town at the time when this Act may come into operation in such town, shall continue to be levied under the procedure in those Acts until an assessment, under the provisions hereinafter contained, shall be in force in such town, and that all the powers and provisions in and by those Acts, or any of them, conferred for the recovery of arrears of assessments, rates, or taxes under those Acts or any of them, shall continue to be in force for the recovery of such arrears until all such arrears shall have been recovered, or shall have ceased to be recoverable, and all arrears so collected shall become part of the Town Fund of such town, and may be expended for any of the purposes of this Act."

The object of these amendments, Mr. Dampier said, was to allow outstanding arrears, under the old chowkeydarce tax, to be collected after the assessments, under the new Act, came into force. When the new assessment came into force there would be certain arrears under the old Act still due, and the object was to allow those arrears being collected simultaneously with the current demands.

THE ADVOCATE-GENERAL said, he understood the object of the amendment to apply to arrears of rates or taxes which would continue to be enforced according to the provisions of the old Act. But he wished to know whether it was intended that the procedure of the old law should be applicable to such arrears, although the new Act was in operation. As the amendment stood, the provisions of the old Act were made to continue if they were in force at the time when this Act came into operation, and they were to continue until the new assessment was made. He thought that it would make the provision quite clear, if, at the end of the amendment, with reference to the recovery of these arrears, the words "notwithstanding that this Act may have come into operation in such town" were inserted.

MR. DAMPIER intimated that the Advocate-General's suggestion would exactly meet his intention, and he would therefore adopt it.

The amendment, with the addition proposed, was then agreed to.

Verbal amendments were then made, on the motion of Mr. Dampier, in Sections 4, 6, 7, 12, 17, 24, 28, 29, 38 and 40.

Section 43, which was on the subject of appeals was omitted, most of the matters contained in the Section being provided for in the subsequent provisions of the Bill.

Verbal amendments were made in Sections 49, 51, 52, and 54.

Section 58 provided that appeals from assessments made by the Town Committee should be made on unstamped paper to the Magistrate.

MR. DAMPIER moved verbal amendments to the effect that the appeals should be made to the Town Committee, who, if they should not grant the prayer of the appeal, should submit the decision of the matter to the Magistrate.

THE ADVOCATE-GENERAL said that as the Section stood, the appeal would be on unstamped paper; but that appeared to conflict with the provisions of Act XXVII. of 1867 of the Imperial Legislature, in the Schedule to which certain stamps were imposed on certain specified classes of petitions; and inasmuch as the Schedule, in so far as it related to petitions, was limited in its terms to petitions of appeal to Municipal Commissioners in the Presidency Towns, the appeals which Section 59 provided from the decisions of Ward to Town Committees might properly be made on unstamped paper. But with regard to appeals to the Magistrate which this Section provided, the Schedule to the Stamp Act did impose a stamp on any petition to a Magistrate in his executive capacity. The effect, however, of requiring an eight anna stamp on appeals under this clause would be such as would practically render the clause inoperative. It was therefore proposed that instead of the petition being presented to the Magistrate, it should be presented to the Town Committee, who would then either determine the matter in favor of the applicant, or, if they could not do so, would refer the matter to the Magistrate; but that reference would not be in the way of petition, and would not therefore require a stamp.

MR. DAMPIER said, he would wish it to be understood that there was nothing in the present amendment which conflicted with or which evaded the real intention of the Stamp Law. Its object was to get over a difficulty in the wording of the Stamp Law, which under the circumstances which had now arisen was opposed to the spirit of that law. The Stamp Law deliberately and specifically exempted petitions of appeal from the "Chowkeydarce assessment," but the assessment under this Bill could no longer be called a Chowkeydarce assessment; so that petitions of appeal presented directly to a Magistrate regarding it would no longer come under the exemption, but by the letter of the law would be subject to a stamp of eight annas. By the device contained in the Section as amended, the petition of appeal would be actually presented to the Town Committee, and would, therefore, not require to be written on stamped paper, while the final decision of the appeal would lie with the Magistrate. The course was strictly in accordance with the intention of the framers of the Stamp Law.

The amendment was then agreed to.

MR. DAMPIER moved the introduction of the following Section after Section 58:—

"Any person who shall have been assessed by a Town Committee, of which the Magistrate has been appointed a member, and who shall be dissatisfied with his assessment, or who shall dispute his occupation of any property, or his liability to be assessed, may apply on unstamped paper to the Town Committee for a review of the assessment, so far as regards himself; and with regard to such applications the Town Committee at a Meeting shall proceed as the Magistrate is directed to

proceed in Section LVIII, and the orders passed by the Town Committee on such application shall have the same effect and finality as orders passed by the Magistrate under Section LVIII. Applications under this Section to the Town Committee at a Meeting shall be subject to the same limitation of time as appeals to the Magistrate under Section LVIII."

He said, he need only repeat what he said at the last meeting. The object of Section 58 was to provide for an appeal from assessments made directly by Town Committees of which the Magistrate was not a member. Then this new Section would provide for a review (not an appeal) of the assessment where the Magistrate was a member of the Town Committee. It would clearly be absurd to give an appeal against the assessment made by that body to the Magistrate. The Section provided that the decision of the Town Committee on their review would be final. The next Section (59) provided for an appeal to the Town Committee from assessments of Ward Committees.

The Section was agreed to.

Verbal amendments were made in Section 60.

MR. DAMPIER moved the introduction of the following Section after Section 60:—

"It shall be lawful for any person, upon whom any assessment shall have been made, who shall, during the period for which such assessment is valid, have ceased to occupy any property in respect to which he may have been assessed, or whose property to be protected, and circumstances, may have changed during the period aforesaid, to apply on unstamped paper to the Magistrate, and the Magistrate, after making such enquires as he may deem necessary, by examination of the applicant on oath or solemn affirmation, or otherwise, may amend the assessment of such applicant as to him shall appear just, or may confirm the same, and in case he shall confirm the said assessment, may order that the applicant shall pay such reasonable costs as may have been incurred by reason of such application. The decision of such Magistrate upon such application shall be final."

The object, he said, was to enable persons who had been assessed, but whose circumstances had changed, or property to be protected had deteriorated in value during the currency of the assessment, to obtain relief, and also to enable persons, who had ceased to occupy any property in respect of which he might have been assessed, to have their names struck off the list of taxpayers.

The Section was agreed to.

Verbal amendments were made in Sections 64, 74, 75, and 78.

MR. DAMPIER moved the introduction of the following Section after after Section 82:—

"In any place to which this Act shall not have been extended, and to which the provisions of the said Act XX of 1850 have been or shall be extended, it shall be lawful for the Magistrate, by the ways and means in and by the same Act provided for raising the amount of the expense of Chowkeydars appointed under the said Act, to cause to be levied such sum as to him shall seem meet, and apply the same in cleansing such place, or in lighting or otherwise improving the same. Provided that the aggregate amount so to be raised shall not, together with the amount to be raised under the provisions of the said Act VI of 1867, exceed the average of two annas per mensem for each house and the amount assessed in respect of any one house shall not exceed five Rupees per mensem."

The object of the Section was to leave the Magistrate exactly as he was under Act XX of 1850, with the same powers that he had under that Act in places to which the new law did not extend, and to prevent those powers being altered in any way by any recent legislation that had taken place.

The Section was agreed to.



KOOMAR HARENDRA KRISHNA moved the omission of the words "tract of country" from the definition of the word "Place" in Section 1. The Council, he said, had omitted entirely the Section providing for the formation of unions; but if, by the definition of the word "Place," we included a tract of country, the result would be the same as if power was given to form unions. If this definition stood as it was, places at a considerable distance from each other might be included together, which, he believed, was not what the Bill now contemplated.

MR. DAMPIER said, he would ask the hon'ble member whether he thought (to go back to an example that had already been worn threadbare) that what were now called the Suburban Unions ought not to be treated as one town. He (Mr. Dampier) quite agreed in the opinion that the operation of the Act should be confined to one town in the ordinary acceptance of the word; that you ought not to skip over a large tract of land, and then pick out another town to form one municipality with the first. But he had found it perfectly impossible to get some definition that would exactly hit off what was intended. The proposed amendment would oblige the Executive Government to divide places for the operation of the Act, which were the same in every thing but name. He did not see how that difficulty was to be got over if the Council thought proper to start with the assumption that the object of the Executive Government would be to extend the Act to the whole of Lower Bengal and to bring under its operation places which were unfit for it. It would be seen that under Section 4 nothing in the Act would authorize the extension of the law to any place inhabited by persons more than one-half of whom might be employed in agriculture only. The Bill was not therefore open to the abuse which the hon'ble member pointed out. If the Government were to attempt anything in the shape of trying to make unions by including rural tracts, the Government would be transgressing the provisions of Section 4, and such an extension of the Act would be illegal.

MR. HOOG said, if the word "Place" stood in Section 4, the Magistrate, acting on behalf of Government, would be entitled to take into account the total population of the town, and all the villages included in any tract of country. By that means a great number of villages, exclusively inhabited by a rural and agricultural population, would be brought within the incidence of the tax. For instance, a town in which it would be right to introduce the Act might consist of two or three thousand persons, and the villages in a surrounding tract of country might contain one or two thousand. Taking then the total population of the whole tract, and deducting the agricultural population, it would then be found that the agricultural population was not more than one-half.

Any number of villages, the population of which was entirely rural, might thus be brought under the operation of the law, which was certainly not intended.

MR. DAMPIER said, he admitted the force of the objection taken, and if the hon'ble member could show how it could be remedied, he would be happy to adopt the amendment.

MR. THOMPSON said, he would support the amendment, because, by the change of the word "village" in Section 4, to "Place" the views adopted by the Select Committee were quite upset. He would put it to the Council generally whether the interpretation given to the word "Place" would not make it capable for the Government to extend the Act to places which were not contemplated. If it was impracticable to omit the words "tract of country" from the definition of the word "Place" in the Interpretation Clause, the word "village," he thought, ought to remain in Section 4.

THE PRESIDENT said, he should prefer to see the interpretation of the word "Place" remain as it was, and the word "Place" in Section 4 again altered to "village," as it originally stood. He thought that would make it impossible to include two separate towns together as one town.

The Council then divided on the amendment that the words "or tract of country" be omitted from the Interpretation of the word "Place" in Section 1:

#### Ayes 6.

Koomar Satyanund Ghosal.  
Mr. Alcock.  
Baboo Peary Chand Mittra.  
Baboo Ramanath Tagore.  
Koomar Harendra Krishna.  
Mr. Thompson.

#### Noes 6.

Mr. Sutherland.  
Mr. Knowles.  
Mr. Hogg.  
Mr. Dampier.  
The Advocate-General.  
The President.

The numbers being equal, the President gave his casting vote with the Noes.

On the motion of Baboo Peary Chand Mittra, the following proviso was added to Section 3:—

"Provided further that no claim on account of arrears under any Act which may be superseded by this Act shall be enforced after three years from the period of such arrears becoming due."

He said, he thought, that the recovery of arrears of assessment should be limited as to time. A man should not be required to pay up the arrears of ten or twelve years' assessment. It would be more satisfactory to have a certain time fixed for the recovery of arrears of assessment, and also for confining claims to the real defaulters.

On the motion of Mr. Dampier, the word "village" was restored to Section 4 in substitution of the word "Place," as agreed above.

The preamble was agreed to, and the title was passed with a verbal amendment.

The Council was adjourned to Saturday, the 20th instant.

# Report on the State of the Salt Market, during the fourth quarter of 1867-68.

From B. L. MANGLES, Esq., Officiating Junior Secretary to the Board of Revenue, Lower Provinces, to the Officiating Secretary to the Government of Bengal.—(No. 2566C., dated Fort William, the 3rd June 1868.)

In continuation of my letter No. 2283 C., dated 18th ultimo, I am directed to submit the following report on the state of the Salt market, during the months of January, February and March last, or the fourth quarter of the year 1867-68.

2. The quantity of Government Salt sold at the Presidency under whole-sale Rowanahs, amounted to maunds 4,94,913, as shewn in the margin, giving a monthly average of maunds 1,64,971, being maunds 40,819 in excess of the sales of the previous quarter. The sales of Government Salt at Pooree, amounted to maunds 5,407 of Pungah, and maunds 46,470 of Kurkutch, against maunds 5,320, and maunds 38,483 of Pungah and Kurkutch, respectively, in the previous quarter, and maunds 6,283 of Pungah, and maunds 38,814 of Kurkutch in the corresponding quarter of 1866-67.

3. The following are the details of the above-mentioned Presidency sales, viz., from the Hidgelee Depôt, maunds 29,168 of Pungah Salt, against maunds 1,09,795 in the previous quarter, and from the Sulkea Depôt, maunds 14,65,745 of Kurkutch, against maunds 2,64,161 in the quarter preceding.

4. The sales of Excise Salt from the Dhossah Golahs during the quarter, amounted to maunds 100, against maunds 150 in the previous quarter. The sales in Cuttack and Balasore from the Stocks of Excise Salt, manufactured during the past season (1866-67) were maunds 6,828 and maunds 8,008, respectively, leaving a balance of maunds 31,461 in Cuttack, and maunds 11,513 in the Balasore District. The manufacture under Licenses granted for the season 1867-68, during the quarter, amounted to maunds 31,461½ in Cuttack, and maunds 89,032 in Balasore. The Board have reason to believe that the quantity of Salt which will be manufactured this season, together with that which is now in store, will be sufficient to meet all the requirements of the Province.

5. The total importations into the Port of Calcutta, and clearances of Sea-imported Salt, during the quarter, are shewn comparatively in the following Statement:—

Description of Salt.	JANUARY TO MARCH 1866.		JANUARY TO MARCH 1867.		JANUARY TO MARCH 1868.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Liverpool Pungah	17,17,409	12,83,954	13,28,458	9,87,555	17,22,369	13,62,453
Foreign Kurkutch	24,117	1,06,761	94,987	1,06,061	81,547	2,06,588
Indian ditto ...	1,23,398	2,41,011	2,09,109	2,11,006	1,12,713	1,02,865
Ceylon ditto ...	.....	8,250	.....	7,000	45	38,114
Total ...	18,64,924	16,39,976	16,32,554	13,12,522	19,16,674	17,10,042

As compared with the previous quarter, there is an increase in the importations of maunds 70,727, and in the clearances of maunds 4,24,158 : there is also an increase under both heads, as contrasted with the results of the corresponding quarter of the two preceding years.

6. The following are the details of the importations and clearances of Indian Kurkutch given above :—

Exporting Port,	1866.		1867.		1868.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay ...	1,02,982	76,849	1,50,900	1,56,715	1,12,713	1,02,865
Madras ...	20,416	86,054	35,889	31,800	.....	.....
Ennore ...	.....	.....	22,320	22,491	.....	.....
Coconada ...	.....	27,664	.....	.....	.....	.....
Eskapally ...	.....	50,344	.....	.....	.....	.....
Total ...	1,23,398	2,41,011	2,09,109	2,11,006	1,12,713	1,02,865

It is to be noticed as a very rare occurrence, that both importations and clearances, during a whole quarter, were confined to the Salt of a single Port.

7. The quantities of Salt which have been despatched into the interior of the country, both East and West of the River Hooghly, *viz.*, *via* the border Chowkeys of Ballikhal and Sankrail and the three Railways, are shewn in the following Comparative Statement :—

Period.	<i>Via</i> Ballikhal.	<i>Via</i> Sankrail.	By the East Indian Railway.	By the Eastern Bengal Railway.	By the Calcutta and South- Eastern Railway.
	Mds.	Mds.	Mds.	Mds.	Mds.
Fourth-Quarter of 1865-66 ..	4,32,280	97,091	85,005	.....	.....
Ditto Ditto 1866-67 ..	3,94,425	1,23,594	2,41,594	.....	.....
Ditto Ditto 1867-68 ..	4,79,287	90,489	8,11,728	2,814	12

For the reasons stated in paragraph 7 of the last quarterly report, no information is available regarding the transport of Salt by the Eastern Bengal and Calcutta and South-Eastern Railways, during previous years. Of the quantity transported by the East Indian Railway, maunds 666 of Salt were despatched to stations beyond Buxar. This was in January last : during the remaining two months of the quarter, the despatches were limited to Stations within Bengal. By a clerical error the figures representing the despatches by the Eastern Bengal and Calcutta and South-Eastern Railways, during the third quarter of 1867-68, were omitted in the last quarterly report: the former amounted to maunds 12,870, and the latter to maunds 83.

8. The Shipments of Salt at Liverpool, per published market reports, were as follows :—

	Tons.
In January 1868	12,081
„ February „	18,370
„ March „	28,242

Total Tons ... 58,693,

being maunds 17,251, and maunds 20,276 more than the total quantities shipped during the previous quarter, and the corresponding quarter of 1866-67.

9. The prices of Liverpool and other Salts per 100 maunds, at the end of each fortnight of the quarter under review, as compared with the prices that prevailed at the same period of the previous year, are given in the following Statement:—

Description of Salt.	PRICES ON 15TH JAN.		PRICES ON 31ST JAN.		PRICES ON 15TH FEB.		PRICES ON 28TH & 29TH FEB.		PRICES ON 15TH MARCH.		PRICES ON 31ST MARCH.	
	1867.	1868.	1867.	1868.	1867.	1868.	1867.	1868.	1867.	1868.	1867.	1868.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Liverpool Pungah ... ..	109	98	113	103	101	110	108	109	108	113	107	111
French Kurkutch ... ..	71	68	84	68	90	70	85	73	85	78	85	73
Jedda ditto ... ..	93	73	95	80	96	80	95	95	90	86	90	89
Ceylon ditto ... ..	70	60	85	85	83	55	81	55	81	62	81	68
Scinde ditto ... ..	36	36	36	35	35	34	35	34	35	35	35	35
Bombay ditto ... ..	37	59	40	59	39	58	38	60	34	64	33	65
Madras ditto ... ..	40	36	40	36	40	38	37	38	38	30	37	36

10. The total quantity of Salt that was available for export on private trade, at the several Madras Depôts, on the first day of each of the three months of the quarter under inquiry, and of the corresponding quarter of the two previous years, is exhibited below:—

Month.				1865-66.	1866-67.	1867-68.
				Maunds.	Maunds.	Maunds.
January ... ..	...	...	...	5,87,020	11,35,778	12,41,769
February ... ..	...	...	...	6,67,398	11,04,665	12,46,724
March ... ..	...	...	...	6,10,858	10,84,910	11,01,621
Total ...				18,65,276	33,25,353	35,90,114

11. The importations into the Ports of Chittagong and Balasore, during the fourth quarter of 1867-68, and in the preceding quarter, are shewn comparatively in the following Statement:—

Description of Salt.	CHITTAGONG.		BALASORE.	
	Third Quarter.	Fourth Quarter.	Third Quarter.	Fourth Quarter.
	Maunds.	Maunds.	Maunds.	Maunds.
Pungah ... ..	16,987	52,925	.....	.....
Kurkutch ... ..	27,115	16,635	11,247	10,043
Total ...	44,103	69,560	11,247	10,043

## Reports on the Cyclone of November 1867.

From F. B. SIMSON, Esq., Officiating Commissioner of the Dacca Division, to the Secretary to the Government of Bengal,—(No. 1583, dated Dacca, the 12th November 1867.)

I HAVE the honor to report the effects of the hurricane which occurred on the morning of the 2nd of November, according to reports received from the districts of this Division up to date.

2. In all the large open rivers about Backergunge and Fureedpore, and on the west of Dacca and Mymensing, the storm sunk the greater number of boats which met its fury, those which were in shallow khalls or which contrived to hold on to the windward shore escaped. The cargoes of the sunken boats were raised, and in many places the rivers were covered with floating bales; very many of the sunken boats were raised after the storm, and were found to have suffered but little damage.

3. The flood tide of the morning of Saturday rose to a great height at Backergunge, and must, I should think, have injured the rice crop, but it receded quickly in the neighbourhood of the Sudder Station.

4. Inundation was severely felt in the Sub-division of Perozepore and the storm blew down much of the kutchia office building there, and damaged the records and furniture, and the water rose sufficiently to injure the goods of the shop-keepers in the bazars. The Collector will visit the southern part of Backergunge, and report more in details as soon as he can obtain a boat.

5. No detailed account has been received from Fureedpore, but there were great numbers of native houses blown down in addition to the damage to the boats in the rivers. The Collector has been directed to visit the country on the banks of the Ganges above Goalundo, and to report on the destruction of property and crops referred to by Mr. W. F. Fergusson, in the *Englishman* of the 8th instant.

6. The Collector of Mymensing reports that except on the Jaboona River the storm was not unusually severe in his district.

7. No report has been received from Sylhet, but persons arriving from that direction, report that there was no heavy gale felt in those parts.

8. I have just returned from a trip some thirty-five miles to the east and north of Dacca District, and I found the rice crops apparently uninjured, and the same fact is reported from all quarters; no complaints whatever as to damage to crops have reached me.

9. Mr. MacWilliam wrote to me privately from Serajgunge, and merely said they have experienced a heavy gale, and thought it was worse towards Dacca.

10. The great destruction done in these parts has been among the boats in the large rivers, and this loss falls on a tolerably wealthy class. I have neither met with nor heard of any distress requiring immediate pecuniary assistance, and unless the Collector of Backergunge reports very badly of the condition of the south of Backergunge District, I do not think that any such aid will be required for this Division.

11. No loss of life has yet been reported.

From F. B. SIMSON, Esq., Officiating Commissioner of the Dacca Division, to the Secretary to the Government of Bengal,—(No. 1634, dated Dacca, the 20th November 1867.)

IN continuation of my letter No. 1583, dated 12th instant, I have the honor to state, for the information of His Honor the Lieutenant-Governor, that from the reports and private letters received from the districts



of Backergunge, Fureedpore and Mymensing, I gather nothing fresh or contradictory to what I stated in my previous report.

2. The Collector of Backergunge has gone to the southern part of his district by boat. The Collector of Fureedpore is now visiting those parts of his district where the Newspapers, and Newspapers only, reported excess of damage beyond that to the boats on the large rivers.

From F. B. SIMSON, Esq., Officiating Commissioner of the Dacca Division, to the Secretary to the Government of Bengal,—(No. 5T., dated Burisaul, the 2nd December 1867.)

IN continuation of my letter No. 1634 of 20th November, I have the honor to forward copies of letters No. 260 of 22nd November, from the Collector of Dacca, and of No. 374 of the 25th idem, from the Collector of Fureedpore, giving further details of the loss inflicted by the Cyclone of the 1st of November.

2. It is clear that the damage to boats and property in both was, as I before stated, enormous; the attempts to estimate this loss are vain, and I put very little reliance on the valuation where they are given; it would be useless and harassing to attempt to ascertain the exact loss. The losers make no complaint and do not claim relief.

3. The first general statements as to damage done to crops were naturally exaggerated. Most of the rice which was blown flat has recovered itself, and the water which overflowed from rivers and water-courses, quickly retired, and in some places actually proved beneficial.

4. A few cases of loss of life are reported, but this loss seems to me exceedingly small when the extensive area over which it occurred is considered, and when it is recollected that the storm was at its worst an hour or more before day-light, when people were least prepared to expect it, and from the darkness least able to help themselves.

5. The Collector of Backergunge visited the southern part of his District. I have myself gone through the south of Dacca along the Pudda river up to Koomar as far as Puttaboka factory, and from thence south to Madaripore and down the Arealkhan river to Burisaul. There is nothing at all approaching to distress; in most places the crops have not suffered at all; in the few places where damage has occurred it has scarcely reduced an exuberant crop to an ordinary one; and in the south of Backergunge a slight rise generally in the price of rice is looked for by the ryots as likely to do more good than will compensate for the injury caused by the Cyclone.

6. At a distance from the large rivers, the damage over the greater portion of this Division is not more than that usually inflicted by a severe "Nor-wester." There is no need whatever for Government or public aid in any part of the Division, and I do not propose to address you further on this subject unless some new facts come to light.

From A. LEVIER, Esq., Magistrate of Dacca, to the Commissioner of the Dacca Division,—(No. 260, dated Dacca, the 22nd November 1867.)

I HAVE the honor to submit, for your information, the accompanying particulars of the late Cyclone of the 2nd November.

2. The Civil Surgeon reports that, on Thursday, the 31st October, it rained steadily from 8-20 A. M. till dark, the wind being chiefly from the N. E. and E. Between 9 and 11 P. M. the wind blew in gusts from the N. E. with heavy driving rain.

3. The morning of the 1st November was wet. Wind E. S. E. and S. E. By 8 A. M. it began to clear off. The clouds were broken, the rain ceased, and there was every probability of a fine afternoon. Heavy showers were seen passing to the S. W. and W. about 1 P. M. In the evening the wind, which at no time was strong, decreased. The clouds looked high, but they covered the whole sky; about 7-30 P. M. a heavy shower of rain, which lasted but a few minutes, came from the N. E.; at 8-30 and 10 P. M. other showers passed over the town. At 10-30 the wind was blowing in gusts from the N. E.; about 11-30 or 11-45 P. M., local time, it began to increase in strength, and by 2 A. M. it was blowing a strong gale from the E. S. E. and S. E. From that time until 5-30 A. M. it continued to blow from the same quarter. Between 8 A. M. and 10 A. M. the gale was at its height; still from the S. E. a bright border of cloud remained stationary over the E. and S. E. horizon all the morning. About 10 A. M. the wind began to veer towards the S. and S. S. W. By 11 A. M. it was stationary in that quarter. The rain which had ceased about 8 A. M. came on again in short drizzling showers. About 11-30 A. M. the wind lulled; the barometer was rising; and the sky looked less dun and stormy. At 2-15 P. M. the wind was S. W., and was stronger than two hours previously.

4. From this time the wind gradually abated, and by 6 P. M. there was only a gentle breeze from the S. S. W. The evening was clear, patches of *cirro-cumuli* passing over the moon. At 9 P. M. the wind was light from the S. S. W.; at day break on the 3rd the wind was still in the same quarter; atmosphere beautifully clear and cool.

5. The District Superintendent of Police, who on the 2nd instant was anchored off Shampore on the Boorigunga river, about ten miles N. W. of Dacca, states that the storm must have commenced about midnight. The gusts of wind increased in violence till about 7 A. M., when there was a short lull; but soon after it was again blowing as hard as ever, the wind having veered from S. E. to S. W. Boats were seen sinking on all sides, and the river rose several feet. The rise at Dacca was estimated to be 3 feet 6 inches. The District Superintendent says 4 or 5 feet; but this I should say was above the mark. He was driven out of his boat about 9 A. M., the waves beating in and fairly swamping it. From this to Feolbaria Factory, a distance of two or three miles, not a single boat was to be seen afloat; at the factory itself, two budgerows were swamped, and the roof of one blown off. By 10 A. M. the storm had somewhat abated, and at 4 P. M. there was merely a stiffish breeze blowing.

6. In the neighbourhood of the factory the *dhan*, most of which was ready for the sickle, had been beaten down by the force of the wind; but it is not anticipated that the crop will have been materially injured. The villages had escaped almost untouched, being protected by the surrounding trees and jungle.

7. In the north of the District the hurricane appears to have been scarcely felt. In Roypoor and Kapashia Thannahs a few huts have been blown down, but no loss of life or boats is reported. It is feared that the Thannahs situated on the Pudda river have not escaped so easily. The storm is known to have been violent in those parts; but detailed reports have not yet come to hand.

8. It is reported that in the city of Dacca 112 *kutcha* houses have been levelled. The number of boats sunk or swept away is stated to be 105; property lost to the amount of Rupees 4,300. There is, however, reason to believe that this estimate is very far below the mark. One or two large trees have been blown down, but *pucca* houses have suffered no material damages. No loss of life has been reported. Towards Tunghi Out-post the *dhan* does not appear to have suffered to any appreciable extent.

9. At Naraingunge the loss of property has been unfortunately considerable, some two hundred boats laden with jute, rice, salt, &c., have been sunk, and the cargoes either entirely lost or more or less damaged. The pariah sloops, from Chittagong and the S. E. coast, were mostly blown up on shore, but a change in the wind and unusual rise in the river enabled them to get off, almost without injury. It is impossible to give anything like an accurate estimate of the loss of property. It is rated by the Mahajuns at some Rupees 60,000. A woman was killed by the fall of a house; no other deaths are reported and no injury to the crops; a large number of *kutcha* houses have been destroyed.

10. From Roopgunge no loss of life is reported, but many huts have been blown. The crops of *boro-dhan* lying along the banks of Magna and Luckya rivers are said to have suffered material damage by the sudden rise of water. It is generally stated that the crops in the interior have also suffered.

11. At Sreenuggur the roof of a two-storied house belonging to a Zemindar fell in, fortunately without causing loss of life. Along the river Pudda the loss in country boats and property has been very large, but it is impossible, without more detailed information, to arrive at even an approximate estimate of the amount of damage done. No deaths are reported from this Thannah.

12. At Rajabaree a boat was swept away with a man on board. His body was cast ashore next day.

13. In Nowabgunge and Hurirampore the *dhan* crops are stated to have suffered to the extent of one-eighth of the whole. One life has been lost, and many boats and houses destroyed.

14. No reports have as yet been submitted from Manikgunge and Jaffargunge.

15. Further detailed information as to loss of life and property, and the state of the crops, has been called for from the subordinate local Police.

16. The current price of rice is so low that any trivial rise, which may have occurred from the destruction of boats laden with rice, in the price of food, is merely nominal and temporary, and it is certain that when fresh consignments arrive from Mymensingh, Sylhet, and Tipperah, which export largely to Dacca, and are said to have suffered even less than this District from the hurricane, that the prices will return to the former low average of about forty seers per Rupee.

17. The general feeling seems to be that, even where most damage has been done, the pressure will be only temporary; and that there will be no necessity for extraneous aid either by private subscription or from the Government. Should such necessity hereafter arise, I shall not fail to bring it to your notice.

From A. W. RUSSELL, Esq., Collector of Furrædpore, to the Commissioner of the Dacca Division,—(No. 374, dated Furrædpore, the 25th November 1867.)

I HAVE the honor to report that, as directed in your order No. 1585, dated the 12th instant, I have visited the tract of country situated along the line of the Ganges river in this District. I have no hesitation whatever in stating my decided opinion, that measures of relief in behalf of the ryots are not required in consequence of any damage done by the Cyclone of the 2nd instant.

2. In the parts where the storm-wind was most furious, or at least the traces of disaster were most evident, the extent of loss of the standing Aman paddy did not exceed 5 annas—I think 4 annas is about the mark. Throughout the District the previous Aous crop had been remarkably good, according to the general report. I had heard some Natives, agriculturists, assert that it was a 20-annas harvest, or  $\frac{1}{2}$  more than the average yield of produce; and some portion of the Aman was cut and stored before the 1st instant. The Aman like the Aous was a very fine crop this season. Thus, allowing a 5 annas loss of the standing rice fields on the morning of the 2nd instant, the harvest of the year remains quite equal to the average yearly produce.

3. The general testimony I have heard here of both Europeans and Natives, the force of the wind was great from the north-east, greater afterwards from the east, but was most violent after that from the south-east. Later still the gale from the southward was scarcely, if at all, less strong than from the south-east. Such were my own observations also; and this led me to examine carefully the north-west promontory of this District in particular.

4. From the latitude of Betka Police Station on the eastern side to that of Muttakhal Factory in the western, I traversed a great part of the country on foot, at varying distances of 100 yards to 4 miles, from the banks of the river Ganges and Chundna, on the 16th, 20th, 21st, and 23rd, instant. On the 13th instant I had visited the coasts to the south-east as far as Manakata khali, which is nearly the extreme point in that direction of this District. The District Superintendent of Police is engaged in enquiring in person in the southern Thannahs.

5. If any tract was more exposed than any other to the wind from north and east and south, it was undoubtedly the north-east promontory of Goalundo, called Kanyediba. It happened that a field of Aman still in the ground, three feet in height, exists there. The ryots said 6 annas of it was gone. It might be so along the margin. Farther, in the middle of the crop, examining many of the blades of corn together and counting the ears, the loss seemed to me to be about one-fourth.

6. Elsewhere, but one or two persons estimated the loss generally to be 6 annas; some made it one-eighth. At Krishtonagpur, the largest mouzah to the northward, along the south bank of the Ganges, consisting of half a dozen villages or kismats, one ryot said he had lost one-half, but it turned out he meant of his rubber plants. If he lost half of what had grown above ground, he must have sown again, for his gardens were all in very fine condition.

7. Nowhere did I see greater traces of havoc than at Kalikapur, near the north-west point of the District, and close to the line of the new Railway. There the one and only opinion of more than a dozen cultivators was that they had suffered a loss of 5 annas. In that neighbourhood I observed two or three fields of pan-burj laid low, but nearly a continuous mile more of them, being sheltered by groves of trees, seemed unhurt.

8. On the whole I am of opinion that, in all events the east, north, and west of this District, there is not an amount of distress, caused by the late Cyclone, calling for relief from the public or the Government. The class that has really suffered is that of the Mahajuns, whose cargo-boats of rice, oil, hides, tobacco, salt, jute, and seeds, were lost in scores. I have not observed any field of Urhur at all in any town, and none of sugar-cane damaged.

9. I annex an interesting statement on the subject in question by Mr. Phelan, of Mudunderry Factory. I know that the opinions therein expressed are entertained also by Mr. Patrick Smith, of Baliakhandi, and Mr. Ramey, of Panchuria.

P. S.—With regard to the south country further report will be made soon.

From B. P. PHELAN, Esq., to S. J. KILBE, Esq., Deputy Magistrate and Collector, Furrædpore, —(dated Mudunderry, Jessore, the 17th November 1867.)

In reply to your official favor, No. 345, dated 12th instant, I have the honor to inform you that, as far as I have seen (and I have been over a great part of the Furrædpore District in this vicinity since the Cyclone), I do not think the late Cyclone has caused such distress as to render it



advisable or necessary to raise subscriptions for the relief of the sufferers in this neighbourhood, for the following reasons:—

1st.—I have ascertained, by inquiries made amongst the ryots themselves, that they have in store their late crop of "aous dhan" uninjured by the Cyclone. Of the standing rice crop, about one-fourth has been destroyed, but as this was a remarkably fine crop previous to the Cyclone, the out-turn from it will be an average one, and the sugarcane and "mashkully," the only other standing crops at this season, have not suffered at all in this vicinity.

2nd.—The loss of cattle has been very trifling, and if an average could be struck, it would not be more than one head of cattle in every three houses. I have been informed that one ryot lost as many as 20 (twenty) head of cattle, but most of the people have not lost any.

3rd.—I have seen few instances of the total destruction of Native houses, and most of those that have been blown down are already re-erected.

4th.—As the price of rice in the large markets in this part of the District is influenced more by the supplies from the Districts of Backergunge and Sylhet than by the local supply, and as those Districts do not appear to have suffered by the Cyclone, I do not think it probable that the price of rice this year will rise above that of last year.

The present rates are from Rupees 1.4 to Rupees 2 per maund.

The greater sufferers by the Cyclone are, I am inclined to believe, the Native Mahajuns, who have lost, in many instances, large boats and their cargoes. The bulk of the people are, I believe, sufficiently independent to tide over the calamity without assistance, and only one village has applied to me for pecuniary assistance, but I have not heard the ryots express any fears regarding a scarcity of food in consequence of the Cyclone. Should Government find it necessary to give relief to the people in this part of the District, I shall be glad to aid any measures that may be decided upon for dispensing the same as far as may be permitted, or as may lie in my power.

From S. J. KILBY, Esq., Deputy Collector, in charge, Furrædpore,—(No. 365, dated Furrædpore, the 20th November 1867.)

Forwarded in original to A. W. Russell, Esquire, Collector of Furrædpore, as the report regarding the damages done by the late Cyclone is being prepared by him.

From T. B. LANE, Esq., Officiating Secretary to the Board of Revenue, Lower Provinces,—(No. 1957M., dated Fort William, the 6th December 1867.)

SUBMITTED in original to the Government of Bengal, for perusal and return.

2. The Board observes that the gale was much less alarming in its effects in this Division than was at first expected.

From C. F. MONTRESOR, Esq., Commissioner of the Burdwan Division, to Secretary to the Board of Revenue, Lower Provinces,—(No. 650A., dated Burdwan, the 29th November 1867.)

IN pursuance of the orders contained in your letter No. 1806M. of the 6th instant, to my address, I have the honor to submit a detailed report on the effects of the hurricane of the 1st instant.

2. The Districts of Midnapore, Howrah, and Hooghly, in this Division, were more or less affected seriously by the gale; and that to the easternmost boundaries bordering on the Hooghly river. In the District of Burdwan the line of exposed country on the river's bank from Cullā to Cutwa suffered considerably, and the crops in most parts of the districts above enumerated have been more or less injured.

3. Considering the bountiful harvest that was in prospect before the 1st, in connection with the injury sustained, I do not anticipate any general material loss, and the market prices as they now stand confirm me in the observation, having assumed the same level to which they were before the hurricane, and lower than they have been for several years past.

4. I have seen it remarked by correspondents in the public papers that the violence of the gale was equal to that of the 5th of October 1864; but such was certainly not the case in this Division.

5. I will proceed to notice each district in order.

HOWRAH.—The storm raged with extreme violence over the town and suburbs, and appears to have been felt throughout the western portion of the district more severely than in the portion lying to the east of the Damoodah. There was considerable loss of human life, occasioned principally by the falling of houses and walls, 78 deaths having been reported by the Police; of these 34 occurred in the town and suburbs, 15 within the limits of the Police Station of Doomjoor, which extend to the borders of the Municipality; 11 in Sankrail, which lies immediately to the south of the Municipality; and 14 in the Bagnan Division. There was one person killed in each of the Police Divisions of Bally, Juggutbulubpore, Oolooberish, and Shampore.

The number of cattle destroyed is estimated at upwards of 500, of which 220 were in the Sankrail Division, 123 in Doomjoor, 80 in Oolooberish, and 58 in Shampore.

Upwards of 30,000 houses, huts, and sheds, are reported to have been blown down, unroofed, or more or less damaged. In Howrah and the suburbs there were 9,553, in Sankrail